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CRITICAL THINKING AND PROBLEM-SOLVING:
EMPOWERING
THE NEXT GENERATION OF LEARNERS

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**INTERNATIONAL GRADUATE RESEARCH IN EDUCATION 2023
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**Critical Thinking and Problem-Solving: Empowering the Next
Generation of Learners**

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*Critical Thinking and Problem-Solving: Empowering the Next
Generation of Learners*

18th November 2023

FACULTY OF EDUCATIONAL STUDIES,
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Decoding the Future: Cultivating Critical Thinking amidst AI Advancements

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Abstract

Critical thinking and problem-solving are the nucleus of cognitive development that play an integral role in multiple significant domains including education and psychology. Today, the promise of artificial intelligence in revolutionizing education and enriching the learning experience is undeniable. However, ensuring that the next generation of learners can utilize artificial intelligence's advantages while also strengthening fundamental cognitive skills like critical thinking and problem-solving remains a pressing concern. This paper analyzes the dynamic relationship between artificial intelligence and the timeless cognitive aptitudes of critical thinking and problem-solving in the context of education. It discusses pedagogical approaches, curriculum enhancements, and ethical considerations in incorporating artificial intelligence to nurture these skills. Furthermore, it underlines existing research gaps, emphasizing the need for deeper analysis of artificial intelligence's influence on cognitive processes and the efficacy of artificial intelligence-driven pedagogical approaches. This paper also accentuates the crucial role of quality education, artificial intelligence, and sustainable development. Ensuring that the future generation is armed for optimal knowledge acquisition as well as transformative competency to face the ever-evolving challenges of the new age.

Keywords: *critical thinking, problem-solving, artificial intelligence, cognitive skills*

1.0 Introduction

John McCarthy (1995) first coined the term “artificial intelligence” (AI) and defined it as “the science and engineering of developing intelligent machines”. Lately, we have grown to witness a noteworthy surge in the evolution and integration of AI technology into multifarious aspects of our mundane lives. This sudden surge of technological innovation has not spared any industries, including education (Zhang & Aslan, 2021). Through the introduction of AI into classrooms and learning backdrops, an unwritten promise to revolutionize education, presenting new forms of learning and enriching the educational experience is on the line.

However, as the term itself refers to, AI was an industrial effort to invent intelligent machines that were meant to assist mankind with their progress, not overtake them entirely. With the rapidly growing advancements in AI technology, a rather binding crisis is on the horizon. Ensuring that the next generation of learners is able to utilize AI to their advantage while simultaneously maintaining and enhancing fundamental cognitive abilities such as critical thinking and problem-solving skills (Zheng et al., 2021). The significant value of this statement is in correspondence with the acknowledgment that AI's abilities are constantly expanding, and it is paramount to prepare the next generation for an AI-driven future, where mastering the skills to analyze, evaluate, and make decisions becomes increasingly essential.

Hailing from the current fourth industrial revolution (4IR) era that is experiencing an ultimate surge of technological advancements, there is an acute need for every individual to excel in core cognitive skills for many vital reasons, especially the future generation (Borrageiro & Mennega, 2023). According to the World Economic Forum, critical thinking is ranked as the second most essential skill for the future workforce, followed by complex problem-solving (Schwab, 2019). While the definition of success constantly evolves, the ability to think critically and decode complex problems remains timeless, directing one toward relevance and resilience.

The global community acknowledged the significance of these skills in attaining sustainability, as outlined in the United Nations Sustainable Development Goals (SDGs). Particularly, SDG Goal 4: "Quality Education" highlights the importance of inclusive and equitable education that promotes lifelong learning opportunities for all. This framework acts as a call for inclusive, equitable, and quality education that cultivates lifelong learning opportunities for everyone (United Nations, 2017). Embedded within the SDG 4 mandate is the acknowledgment that quality education expands outside the radius of knowledge transference. It further highlights the importance of cognitive skills and competencies that foster individuals to thrive in a constantly evolving global landscape (Saini et al., 2022).

By exploring the cultivation of critical thinking and problem-solving skills in the AI-driven educational landscape, this paper aligns with the global mission of fostering sustainable education for the future generation and encapsulates the core concepts and challenges of counterbalancing the benefits of AI to thrive in a dynamic future.

2.0 Theoretical Overview and Literature Synthesis

Critical thinking skills are oftentimes labeled as Higher-Order Thinking Skills (HOTS) to distinguish them from 'simpler' skills, such as memorization. Critical thinking is an innate skill that requires reflection, analysis, synthesis, and attention to detail (Halpern, 2001). The intricacy of thinking critically often originates from the multidimensional nature of the issue or the demand to draw a decision or solve a problem when the available information is insufficient, probabilistic, or not entirely credible (Miterianifa et al., 2021).

According to Smith's critical thinking circle, there is an iterative and interconnected essence of these core cognitive skills. In her model, Smith describes how observation and inquiry foster the development of discussions, which are then evaluated critically, resulting in deeper reflection and refinement (Collins, 1992). Critical thinking is a dynamic cyclical process that promotes continuous improvement and deepening of an individual's understanding of a subject or problem, simultaneously sharpening their problem-solving skills (Dwyer et al., 2014). As education evolves with AI integration, concern occurs about how these technological advancements align with human cognitive intelligence.

Today AI has evolved and integrated itself into modern education. It offers a myriad of potential advantages such as adaptive content delivery and personalized learning experiences (Karandish, 2021). AI can provide learners with tailored resources and real-time feedback, enhancing the learning process (Gururaj, 2023). However, it also poses many disadvantages such as data privacy concerns, the potential for over-reliance on AI, and the risk of reducing human interaction in academic settings. While AI can aid in information deliverance, its role in fostering HOTS like critical thinking and problem-solving remains an issue of debate (Bai et al., 2023). In the current age of AI evolution, educators can draw upon established theories and models in order to develop these cognitive skills.

Bloom's Taxonomy classifies cognitive skills into 6 levels, with HOTS at the top. Since AI is beyond capable of supporting lower-order thinking by delivering data and facilitating understanding, educators' concentration should be on enhancing HOTS, such as evaluation,

analysis, and synthesis, which promote cognitive skills such as critical thinking and problem-solving skills (Anderson & Krathwohl, 2001). Besides, Vygotsky's Social Development Theory highlights the pivotal role of social interaction and collaborative knowledge in optimal cognitive development. AI is capable of facilitating interactions and peer discussions, producing a conducive environment that stimulates critical thinking (Vygotsky, 1978). Hence, by combining the interconnected elements of these theories, a robust framework for cultivating critical thinking and problem-solving skills for future learners within an AI-integrated educational context is highly plausible.

3.0 Implication

The integration of AI technologies in education presents a transformative opportunity to enhance cognitive skills among learners. However, achieving this requires careful consideration of pedagogical strategies, curriculum design, and ethical dimensions (Eman Alasadi & Baiz, 2023). Effective pedagogical methods for cultivating critical thinking alongside AI technologies include strategies such as Socratic questioning and adaptive and collaborative learning. Encouraging learners to engage in thought-provoking inquiries stimulates their ability to think critically (Lee et al., 2014). Namely, online platforms supported by AI facilitate teamwork and problem-solving, fostering analytical and teamwork skills. Meanwhile, adaptive learning powered by AI tailor content to individual student needs, providing challenges and resources at their appropriate skill level while encouraging learners to think critically and reflect on their learning experiences (Bates et al., 2020).

In the context of curriculum enhancement to foster critical thinking and problem-solving skills in conjunction with AI, efforts should include widespread integration including promoting AI literacy, project-based learning, and multidisciplinary approaches. AI literacy will equip learners with fundamental AI concepts and practical applications while optimizing their cognitive skills (Kim et al., 2019). Project-based learning acts as a valuable addition to the curriculum, offering learners the chance to work on AI-related challenges that demand critical thinking such as model development and research algorithms (Martinez, 2022). Meanwhile, an interdisciplinary approach, connecting AI with various subjects prompts learners to assess the ethical implications of AI, promoting a holistic understanding of AI's impact (Howson & Kingsbury, 2021).

Finally, it is essential to address the ethical dimensions and guide learners on the responsible use of AI technologies, emphasizing ethics and fairness in AI algorithms. Educators must evaluate how AI impacts learners' cognitive abilities, considering both its potential to enhance and inhibit critical thinking and problem-solving skills (Akgun & Greenhow, 2021). Striking a balance between AI's advantages and challenges is an inevitable need in this constantly evolving educational setting. By taking these implications into account, it is not only an act of empowerment for educators to effectively harness AI's potential for enhancing critical thinking but also enables expert navigation of the associated ethical considerations (Adams et al., 2023).

4.0 Future Work

There are notable research gaps in the exploration of the interplay between critical thinking and AI (Chen et al., 2020). First, comprehending the cognitive processes involved in critical thinking and problem-solving skills with AI assistance needs more in-depth analysis. This includes exploring AI's influences on learners' information processing and decision-making skills (Giraldo-García et al., 2015). Similarly, the optimal integration of AI tools into various educational contexts and their impacts on cognitive skills need to be studied further. Furthermore, the efficiency of specific AI-driven pedagogical interventions in cultivating

critical thinking skills is a domain worth detailed exploration (Chiu et al., 2023).

Cultivating cognitive skills in learners is not only about their immediate educational experiences but extends to long-term implications. Future research should study the career climate of learners who develop strong critical thinking skills with AI support. Analyzing whether these individuals are better equipped to perform well at work, and contribute to society is paramount. This longitudinal assessment will interpret the profound societal impact of fostering critical thinking and problem-solving skills through AI-integrated education (Silver, 2023). It is important to stay attuned to ongoing technological transformations and acclimate educational strategies accordingly. Furthermore, exploring the ethical domains of AI as it relates to education and cognitive skills development is also an area of growing significance (Khogali & Mekid, 2023). By identifying these research gaps, assessing the long-term impact, and adapting to technological advancements, we can ensure that the strategies discussed in this paper stay practical and productive in the evolving age of AI in education. societal ethical considerations (Adams et al., 2023).

5.0 Conclusion

This paper discussed the complex interplay between cognitive skills and AI within the realm of education. There is a need for a nuanced interpretation of these cognitive processes when AI is incorporated into the educational equation. Additionally, the importance of investigating AI's influence on learners' cognitive skills, ensures that AI catalyzes enhancement instead of inhibition in the development of these skills (Zhang & Aslan, 2021). The uncharted domain involving the effectiveness of AI-driven pedagogical interventions in fostering critical thinking and problem-solving skills is also discussed.

As AI continues to advance rapidly, the call to action is rather clear. The significance of fostering critical thinking and problem-solving skills in the next generation of learners is essential to bridge existing gaps in our AI knowledge. A multi-stakeholder collaboration is pivotal in developing pedagogical approaches that harness AI's potential is crucial in equipping learners for the complexities of the AI-infused future (Francisco & Björn-Ola Linnér, 2023). Hence, this paper underscores the interconnectedness of quality education, AI, and sustainable development, emphasizing their role in shaping the world's future.

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Cognitive Resilience as a Mediator between Psychological Distress and Depression among Counsellors in Malaysia

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Abstract

Depression is a significant mental health issue widely known by society; it is one of the most common affective disorders. This study investigated the relationship between cognitive resilience, psychological distress and depression among counsellors in Malaysia. The mediation effect of cognitive resilience on the relationship between psychological distress and depression has been examined. A total of 103 respondents were selected using randomised sampling. The research used the Pearson correlation coefficient to test the correlation. The mediation model was tested using SPSS Macro. The results showed that there is a significant relationship between psychological distress, cognitive resilience, and depression among university counselors in Malaysia. Specifically, cognitive resilience partially mediated psychological distress and depression. The study concludes, psychological distress, and depression are correlated with cognitive resilience as the mediator. Understanding the impact of psychological distress and cognitive resilience toward depression should be improved by providing intervention in enhancing counsellors' cognitive resilience and coping strategies for psychological distress.

Keywords: *cognitive resilience, psychological distress, depression, university counsellor*

1.0 Introduction

Depression is a significant mental health issue widely known by society; it is one of the most common affective disorders. Within the Malaysian primary care patient population, the prevalence of depression is estimated to be between 6.7-14.4% (Izzudin et al., 2018). Concerning the healthcare sector, healthy and highly functional employees are important to ensure proficiency. Otherwise, the affection of depression could potentially lead to jeopardy of the client's welfare, violence against the ethical code, and even lead to substance misuse (Spoorthy et al., 2020).

Extreme stress in life experience is considered a common risk factor for depression. The symptoms of psychological distress involve sleeping disturbance, irregular eating habits, provoked anger, chronic fatigue, and other physical symptoms (American Psychiatric Association, 2013; Segerstrom & Miller, 2006). The symptoms undeniably harm one's health, nevertheless, people cope with psychological distress by eliminating the stressors or when the individual increases their stress-tolerance level (American Psychological Association, 2022).

The essence of resilience in fact enables some people to cope with stressful experiences. Resilience is defined as a result of successfully adapting to a challenging environment and flexibility in receiving internal and external demands (American Psychological Association, 2022). The cognitive approach has a greater influence in adversity, thus resilience acts as a

protective factor against psychological distress. Typically, the cognitive functions of individuals play a critical aspect in helping one to positively adapt to setbacks and negativity. Hence, individuals who are susceptible to depression often have higher levels of resilience (Jung et al., 2021).

Hypothetically;

- Ha₁: There is a significant negative relationship between cognitive resilience and psychological distress among counsellors.
- Ha₂: There is a significant negative relationship between cognitive resilience and depression among counsellors.
- Ha₃: There is a significant relationship between psychological distress and depression among counsellors.
- Ha₄: Cognitive resilience significantly mediates the relationship between psychological distress and depression among counsellors.

2.0 Counsellor's Psychological States

Counsellor is an occupation that provides supportive services. According to the research on the condition of healthcare workers, they had shown that counsellors associate with long-term and short-term distress, countertransference, changes in mindset and possess issues that are similar to the corresponding client (Cohen & Collens, 2013; Michalopoulos & Aparicio, 2012). The study done by the British Psychological Society found that 46% of psychologists and psychotherapists suffered from depression, and 49.5% reported that they felt they were failures (Mace, 2016). Psychologists and allied mental health professionals are subject to work-related health impairments, including compassion fatigue, traumatization, burnout, psychological distress, and depression (Galiana et al., 2021).

2.1 Relationship between Psychological Distress and Depression

Several research proved that there is a significant relationship between psychological distress and depression. According to the research conducted by Sahin and others (2022) on the correlates of depression, anxiety and stress among boarding school counsellors from Turkey stated that stressful life events in school counsellors have a correlation with the presence of depression. Another research conducted by Lincoln and others (2011) on the correlates of psychological distress and Major Depressive Disorder among African American men. The researcher concluded that stressors such as losing a loved one, financially unstable, educational attainment and illness had been proven to be associated with psychological distress and depression.

2.2 Relationship between Cognitive Resilience and Depression

Based on the research done by Brillon and colleagues (2021) on the psychological distress of mental health care workers (MHW) during the COVID-19 pandemic in Montreal and Laval. Research stated that a lack of resiliency inhibits one's sustainability. Another research investigated by Awano and other colleagues (2020) assessed the degree of anxiety, depression, resilience and other mental health symptoms among healthcare workers in Japan during the COVID-19 pandemic. The researcher concluded that the lower the depression and anxiety the higher the resilience among healthcare workers during high demand, and chronic stressors.

2.3 Relationship between Psychological Distress and Resilience

The relationship between psychological distress and cognitive resilience has been proven to be significant based on other findings. Based on the research done by Mangialavori and others (2022) investigated the psychological distress and resilience among Italian Healthcare Workers of Geriatric 3Services during the COVID-19 Pandemic. The research reported that the Physician had higher significant resilience and distress levels than rehabilitation professionals and healthcare assistants respectively. Another research done by Lamb and Cogan (2015) investigated the relationship between work-related stressors and building resilience in mental health workers. The researcher discovered that the ways in which workers cope with work-based stressors and build resilience are varied, whereby, resilience-building is essential in everyday life stressors.

2.4 Cognitive Resilience as a Mediator

Based on the literature, the results indicated the importance of the influence of resilience on the individual's psychological distress and depressive symptoms. Therefore, this study intended to investigate the mediation effect of cognitive resilience toward psychological distress and depression among university counsellors. The hypotheses of the study showed that the higher the psychological distress, the lower the cognitive resilience, and the lower the cognitive resilience, the higher the depression experienced by the counsellors. Apparently, the higher the level of psychological distress, the higher the level of depression experienced by university counsellors.

3.0 Method and Sample

This study was conducted using quantitative research, with a non-experimental correlational design to investigate the relationship between psychological distress, depression and cognitive resilience as a mediator. The sampling method in this research is randomized sampling. The sample of the research is the university counsellors who are Malaysian, with no age restriction, and officially work as a counsellor in Malaysia's Universities. A total of 12 respondents were collected in the pilot study and a total of 103 respondents were recruited in the actual study by using G*Power analysis to determine the sample size (Kenny & Judd, 2014).

4.0 Analysis

The Pearson correlation coefficient was used to measure the correlational relationship between psychological distress, cognitive resilience and depression by using SPSS Software Package. The mediation model was used by using SPSS Process Macro which is described as a logistic regression path analysis modelling tool to investigate the control of the mediator on the relationship between psychological distress and depression. The Pearson Correlation test is used to investigate the relationship between the variables.

5.0 Result and Discussions

Table 1. Correlations between Psychological Distress, Cognitive Resilience and Depression

Variable	Mean	SD	p	Psychological Distress	Cognitive Resilience	Depression
Psychological Distress	11.67	5.07	.00	-	-.86**	.89**
Cognitive Resilience	42.05	9.06	.00	-.86**	-	-.88**
Depression	1.36	3.87	.00	-.89**	-.88**	-

****p < 0.01**

Table 1 proved that psychological distress ($r = .89$, $p < .01$) was significantly correlated with depression. The results of cognitive resilience ($r = -.88$, $p < .01$) were significant and negatively correlated with depression. The results indicated that the higher the psychological distress and the lower the cognitive resilience, the higher the tendency to develop depression. The table above shows that there is a negative correlation between psychological distress and cognitive resilience with the value of correlation ($r = -.86$) at the level of $p < .01$. The results showed that higher psychological distress inhibited the power of resiliency.

The regression model, mediator is to investigate whether cognitive resilience mediates the relationship between psychological distress and depression, by using SPSS Process Macro (Hayes, 2012). Figure 1 illustrates the mediation model of cognitive resilience on the relationship between psychological distress and depression.

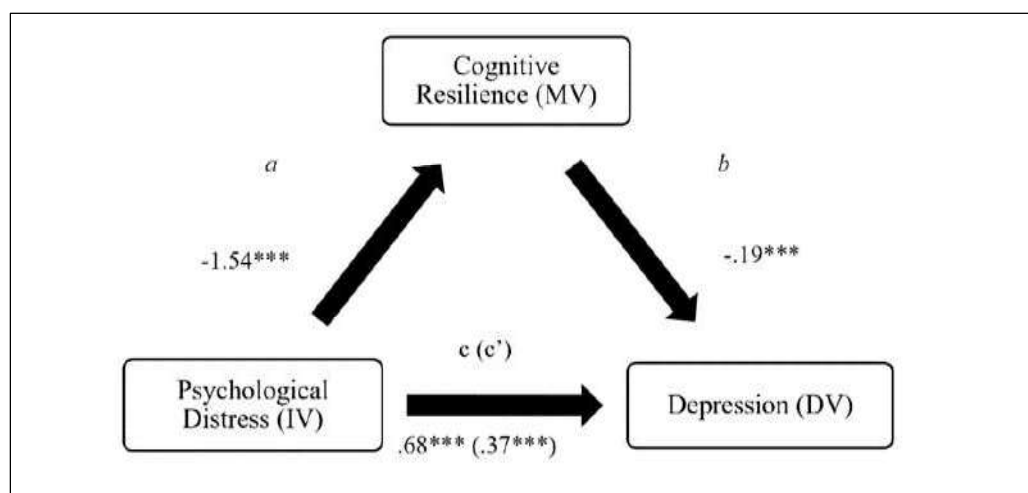


Figure 1. Mediation model for the relationship between psychological distress, cognitive resilience and depression

(*p < .001)**

As displayed in Figure 1, in step 1 of the mediation model, the regression of psychological distress toward depression, with the absence of a mediator (cognitive resilience), was significant with the value, $b = .68$, $t = 19.89$, $p < .001$. In step 2, the regression showed that the psychological distress possessed by the counsellors toward the mediator (cognitive resilience); path a, was also significant with the value, $b = -1.54$, $t = -17.23$, $p < .001$. Step 3 of the mediation process showed that the mediator (cognitive resilience), controlling for the tendency of developing depression among counsellors, was significant, with the value, $b = -.19$, $t = -6.00$, $p < .001$. Lastly, step 4 of the analysis revealed that psychological distress significantly predicted the development of counsellors' depression while controlling for their cognitive resilience, $b = .37$, $t = 6.44$, $p < .001$ (Baron & Kenny, 1986). The results above can be concluded that cognitive resilience partially mediates (complimentary mediation) the relationship between psychological distress and depression among university counsellors.

6.0 Discussion

As hypothesized in this current research, psychological distress, cognitive resilience, and depression are intercorrelated. Specifically, cognitive resilience partially mediated the relationship between psychological distress and depression. This indicated that counsellors who

are more likely to experience psychological distress are associated with higher depressive feelings. Additionally, counsellors with higher psychological distress develop lower cognitive resilience, which successively contributes to depression in an individual. According to the research done by Polanco-Roman and others (2016) reported whereby individuals who experience negative stress have a higher probability of developing depression (Polanco-Roman et al., 2016). Therefore, psychological distress is correlated with depression (Hirsch et al., 2011; APA, 2013; Vuorilehto et al., 2014). However, the root of this phenomenon was due to the way people deal with stressful life events. By comparing the current research to other research, the research done by Brillon and colleagues (2021) on the healthcare professions which result showed that the professions with higher psychological distress and depression are lacking with resilience skills.

Not all people will develop feelings of depression after they experience stressful life events. In human nature, individuals who use less effective coping strategies in their lives attempt to have higher depressive feelings than individuals who use useful coping strategies in dealing with problems (Bazrafshan et al., 2014). For instance, when people face stressful life events, some of them will focus on ways to relieve those stress and develop wishful thinking, mental disengagement, and impulsiveness to deal with the situations which so-called cognitive resilience (Nia et al., 2021). Specifically, in these relationships, cognitive resilience acts as a partial mediator that mediates psychological distress and depression.

7.0 Conclusion

This study aimed to investigate the relationships between psychological distress, cognitive resilience and depression among university counsellors in Malaysia. As hypothesised, there is a positive significant relationship between psychological distress and depression. There is a negative significant relationship between psychological distress with cognitive resilience and cognitive resilience with depression. The findings of this research also showed that cognitive resilience partially mediated the relationship between psychological distress and depression. This research recommended further exploration in finding other effective interventions and precise ways of practising cognitive resilience for depression, in contemplation of decreasing the mortality of depression.

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Exploring Supervision Experiences of Guidance and Counselling Teachers in Primary School

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Abstract

Guidance and counselling services are provided to primary school students by guidance and counselling teachers. The services rooted in a proper system serves as a guideline for the guidance and counselling teachers to render the services in ensuring the holistic growth among the primary school students. Nowadays, there are many issues faced by the primary school students which include academic achievements, internet/gadget addictions, relationship, and emotion-based developmental issues. These issues seriously affect their academic progression and negatively influence their holistic development. Guidance and counselling teachers play an essential role to curb this scenario. Therefore, guidance and counselling teacher's self-efficacy must be maintained for the best quality of services rendered; and counselling supervision is required to ensure the effectiveness of the services, whereby support and proper guidance are provided to overcome the difficulties in their services. To date, it is evident that there is a lack of empirical study emphasising supervision in guidance and counselling services at primary schools setting. To bridge the gap as well as to understand further about the phenomenon, this study is intended to explore the supervision experiences of primary school guidance and counselling teachers in Malaysia in rendering their services at their respective work settings.

Keywords: *supervision, guidance and counselling teachers*

1.0 Introduction

Guidance and counseling services were introduced in Malaysian schools in the early 1960s. The service started in secondary school and focused on vocational guidance due to transformation of economy from agriculture to industry in the country (Yussuf, 2021). Guidance teachers were started to deliver guidance and counselling service. School Guidance Services books were published as a reference in providing guidance services. In 1996, full-time counsellors were appointed in secondary schools and the counselor-to-student ratios was 1:500 (KPM, 2015).

Starting the year of 2000, the Ministry of Education Malaysia has been enforcing all primary schools with a total number of enrolments exceeding 350 to have at least one guidance and counselling teacher appointed (See & Ng, 2010). However, in the situation where the enrolment of students is less than 350, a guidance and counselling teacher can be placed with an academic teacher to hold assist with guidance services (Abdul Rahman, Mohd Isa & Atan, 2013). The primary school guidance and counselling teachers are then trained at the Institut Pendidikan Guru throughout the country to fulfil the needs of the current scenario. They started to service in 2017 in primary schools of Malaysia.

Counselling service is useful in helping students to function well in their life. There are many responsibilities shouldered to the school counsellors which include helping students with

academic or career goals, developing skills, identifying issues, reporting cases, realigning negative behaviours, and serving as a bridge between parents, teachers and students (American School Counsellor Association (ASCA), 2019). In Malaysia, there are four main emphases in primary school counselling service which are: (1) students' personality development and expansion, (2) students' discipline enhancement, (3) students' career education, and (4) students' psychosocial and mental well-being. Hence, effective comprehensive service is essential to build positive image towards the service and to encourage primary school students in seeking psychological help in dealing with life issues.

Therefore, supervision is required to enhance self-efficacy among the guidance and counselling teachers to better their service. Supervision is a session between supervisor and supervisee to discuss issues related to the counselling service. It serves as a check and balance measure for the service rendered by guidance and counselling teachers. Supervision can foster the supervisee's professional development for a supportive and educational function (Janine and Rodney, 2014). It also ensures client's welfare by monitoring the process of counselling service and the role of counsellors. For Malaysian primary schools, the authority to supervise the guidance and counselling teachers is the school's headmaster. Thus, this creates the research gap to explore the supervision experiences of the primary school guidance and counselling teachers.

There are three types of supervisions such as administrative supervision, clinical supervision, and developmental supervision (Henderson, 1994). Often, the guidance and counselling teachers have administrative supervision and programme management supervision given by the school's headmaster. However, the school's headmaster is not very familiar with school counselling practices or relevant duties by the counsellor. Then, how do guidance and counselling teachers deliver their service and how do they ensure the effectiveness of their service? Hence, this creates the research gap to describe supervision experience among the primary school guidance and counselling teachers in Malaysia.

2.0 Literature Review

2.1 Supervision

Based on the National Counselling Society (2022), supervision is a process of examining the quality of counselling service with a more experienced supervisor to support and ensure counsellors stay professional based on ethical guides. Supervision is just like intervention of supervisor using supervision models to help supervisee in the similar field. For the focus of this research, supervision is essential to ensure the effectiveness and maturation of primary school guidance and counselling service.

Supervision can guide guidance and counselling teachers when they face difficulties in their career (Banker & Goldenson, 2021; Landon & Schultz, 2018; Tarlow, McCord, Nelson, & Bernhard, 2020). During supervision, the supervisor may guide them based on the supervision model. For example, the discrimination model is widely used in the supervision process by the supervisors. There are three focuses in this model during supervision. The first focus is the process. The supervisor may discuss with the supervisee the process of a counselling session. Supervisee can share with the supervisor about the intervention, technique used, and issues of the client in the session. The supervisor may examine the process adopted by the supervisee in their practice. Guidance in their practice in different roles such as teacher role, counsellor role or consultant from a supervisor can help them to enhance their ability in their service. Supervisees can learn from the feedback of supervisors to ensure they play their role in a proper and ethical way. The supervisor can continuously ensure their progressive development (Brown & Carrola, 2022).

Supervision can increase the self-efficacy of guidance and counselling teachers in their service (Handaka et al., 2022). During supervision, they are exposed to new information or guidance to improve their competencies. When supervisees discuss with their supervisors, they may come to the realisation that they need to improve and enhance their knowledge or skills in counselling theories. For instance, issues of difficulties in applying counselling theories during session. Supervisors may impart some practices, such as through reading counselling materials or sharing from experts, guidance and counselling teachers may improve themselves with different approaches during sessions. They may be more capable and confident in their decision-making during sessions. Their self-efficacy is the critical factor in rendering the effectiveness of counselling services.

2.2 Guidance and Counselling Teachers in Primary School of Malaysia

Guidance and counselling service in school of Malaysia is conducted based on the Directory Book for Implementation of Guidance and Counselling Services at Primary and Secondary School (KPM, 2015). It is an essential guide for those who are responsible in the related field. In primary school, the one who is going to deliver the service is called guidance and counselling teachers.

There are responsibilities stated in the directory book of guidance and counselling service for primary school guidance and counselling teachers in Malaysia. One of the job scopes is providing counselling services for students in individuals and groups (Johari & Amat, 2019). As a requirement for counselling service, guidance and counselling teachers must conduct at least one individual counselling session every day, or 150 sessions per year. For group counselling, the requirement is to deliver one session at least in a week, or 40 sessions in a year. During the sessions, guidance and counselling teachers are expected to assist students with their mental health issues.

Another responsibility of guidance and counselling teachers is documentation. Documentation involves reporting the services delivered such as reports of counselling services, programmes, and daily service records. Guidance and counselling teachers too must arrange and organise programmes based on four main focuses of the service. The four main focuses of the service are students' personality development and expansion, students' discipline enhancement, students' career education, and students' psychosocial and mental well-being. These focuses are implemented in different programmes for students' development. Therefore, the guidance and counselling teachers must plan, implement, and regulate activities and programmes (Abdul Rahman et al., 2013). Another responsibility shouldered is, the school administrators alternatively can appoint guidance and counselling teachers to enter replacement classes. During the replacement classes, the guidance and counselling teachers must conduct guidance activities. They are responsible for consultation with parents, teachers or administrators; and prepares a conducive counselling room for the services. The effectiveness of counselling services is determined by the guidance and counselling teachers' competency in helping clients with various issues.

2.3 Challenges of Guidance and Counselling Service in Primary School

There are challenges among guidance and counselling teachers that prove the importance of supervision in maintaining an effective service to school. One of the challenges is, the school administrators' comprehension of the job scopes because they are not trained with the same background of expertise (Johari & Amat, 2019). Guidance and counselling teachers carry their weight of responsibilities, which are far different from teaching roles. School administrators are mostly from teaching backgrounds in their previous roles. They sometimes will appoint guidance and counselling teachers to participate in some additional unrelated jobs. Guidance and counselling teachers may experience stress and face difficulty balancing their workloads

due to this condition. In addition, this situation may reduce the time allocated for its own service, such as time for counselling sessions.

The next challenge among the primary school guidance and counselling teachers is the overpopulation of students with limited human resources (Mohd Ali et al., 2020). Based on the directory book, when the number of students exceeds 350 in a school, they are entitled to have a guidance and counselling teacher. The number of guidance and counselling teacher at respective school will depend on the number of students in the school. However, there is still a workforce shortage in most primary schools to deliver the service. Being overloaded with responsibilities, specifically in counselling where there may be a high volume of clients waiting, or where administrators tasked them with many other commitments, these may prevent them from providing counselling to students during their most crucial time. These situations may result in ineffective service, and they will feel self-doubt in their self-efficacy. This condition is also found similar in Turkey. Although there is an increase in the number of counsellors and schools, counsellors there still have to serve a large population of students (Arslan and Sommers-Flanagan, 2018).

2.4 Supervision in Primary School Counselling Service

Nor (2016) founded that in Teacher Training Institute, role of supervisor is important to train professional counsellor in domain of knowledge, attitudes and skills. Qualification of the lecturers must be prioritized to applicants who have doctorate in counselling and more than five years experiences as school counsellor. This is because supervisor who still exposes continuously to school counselling related services will be able to be knowledgeable in school counsellor issues. Supervisor must be competent in order to guide school counselling students to serve in primary school. Exploration on practicum supervision on guidance and counselling teachers in primary school of the study shows that it is very important to have depth understanding about the lived experience of counselling students during their practicum. However, there is lack of research on supervision after graduation of this population. It creates research gap to explore the lived experience of this group of guidance and counselling teachers when they enter primary school to serve as guidance and counselling teachers after graduation in Teacher Training Institute.

Based on Sumari et al. (2021), supervision after graduation is another critical issue in the field of counselling. Malaysian Board of Counsellors under the Counsellor Act 1998 only requires individuals to register with the Board. Once individuals finish their degrees, they are eligible to apply. Once registered, they can offer and perform counselling services without supervision. The Counsellor Act 1998 does not mention post-graduation supervision. This may lead to situations where inexperienced counsellors conduct counselling. Without proper supervision after graduation, there may be inexperienced counsellors who harm clients. From the finding of this research, it shows the importance to explore the supervision experience of guidance and counselling teachers in primary school.

3.0 Implication and Future Work

Guidance and counselling service in primary school is still in the process of development. Supervision can contribute to the maturation of the system (Friesema, 2020). During supervision, the supervisor can identify the source of help needed by the supervisee, and adjustments can be made to improve the system. Guidance and counselling service in primary school has a comprehensive guideline for guidance and counselling teachers. However, there is no part for supervision sessions among guidance and counselling teachers. The National Counselling Society (2022) suggests that there is requirement of one and half hours in a month for full-time counsellors to have supervision. Along the supervision process, supervisees can be reflective of their service, which can improve the service's efficiency. They can know what

actions should be taken, in a time of crisis, even without a supervisor. The present study is expected to serve as school counselling supervision research that can contribute to the broader supervision literature in professional counselling and to advance a needed scholarly conversation about supervision in the school counselling specialty.

4.0 Implication and Future Work

Sherr, Bergenstrom and McCann (1997) suggested that exploration to have an understanding on how counsellors build intervention during therapy and their competence in their service is needed. The scholarly finding may contribute to the development of effective training models for counsellors when they face issues in their work. The study of Khoshfetrat et al. (2022) explored lived experiences of problematic supervision and the findings indicates the negative consequences to counsellors in delivering their service. The finding of Harries and Spong (2017) indicated that school counsellors may have specific needs from supervisor to improve their therapeutic role in their service. The study implicates supervisors and counsellors the importance of supervision in counselling service. This study also supports and recommends for future studies in this area of supervision especially supervisory needs of school counsellors in primary schools. PYD lens provides valuable insights into designing impactful youth programs worldwide.

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Postgraduate Programme as a practice of Extension Education: A Conceptual Review**Atikah Yusof¹ & Mohd Mursyid Arshad^{2*}**¹Institute for Social Science Studies, Universiti Putra Malaysia, Serdang, Selangor²Faculty of Educational Study, Universiti Putra Malaysia, Serdang, Selangor

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Abstract

As students are being prepared for the Industrial Revolution 4.0, it is crucial to Generic skills are essential components that must be incorporated into everyone's daily activities in order to support lifelong learning. Following the shift of COVID-19 from a pandemic to an endemic phase, self-directed and remote learning methods have been integrated into the educational system, increasing awareness of the value of lifelong learning. These abilities are acknowledged as strengths that support people in overcoming difficulties in the workplace and daily life in future. For this purpose, the first phase of the inquiry is to understand how the formal educational system fosters students' self-efficacy improvement with a focus on the Extension Education as a hub for the process of lifelong learning. Importantly, in this context, youth empowerment is contingent on the practical application of skills in real-world contexts. The approach fosters a sense of responsibility as well as the conviction that their activities have a positive impact. Throughout this process, the characteristics of Positive Youth Development, commonly symbolized by the '5C' framework (competence, confidence, connection, character, and compassion), are cultivated. This nurturing happens through the establishment of productive interactions between young adults and adults during developing abilities tasks, proactive involvement by youth, and the development of leadership characteristics. However, there is still room for more research on how to integrate Extension Education and general elements and also research from the student perspective is required to examine the usefulness of such discourse in identifying certain competencies. The philosophy of Extension Education serves as the fundamental foundation for the field of education. Its primary duty is to ensure that essential knowledge, abilities, and values are transferred from one generation to the next. This information and skill exchange is essential to the educational process and shapes society's ongoing development and expansion. Apart of that, this concept paper's purpose is to provide an explanation of the definition and development of Extension Education especially on how postgraduate programs fit within the established framework of extended education and to describe how this learning process affects youth development and generic skills.

Keywords: *extension education, e-learning, self-efficacy, Positive Youth Development (PYD)*

1.0 Introduction

Maslow (1943) believed that learning was a continuous process toward self-actualization. Therefore, particular skill sets and a commitment to continual learning are vital for future success. These traits are essential for optimizing technology and other change drivers and ensuring that everyone benefits from these advances in the ever-changing world of innovation. In light of COVID-19, the International Labor Office prioritizes lifelong learning and self-

improvement skills in its 2022-2025 Strategic Plan (Bridgford, 2020). Andersen (2012) and Nghia (2017) argue this is crucial for future success. Universities's program as a hub of Extension Education are perfect for studying the complete developmental process, making them the hub for lifelong learning (Jackson & Michelson, 2016).

According to Sichula (2016), extension education enables learners to develop a variety of abilities and fulfill their intended objectives postgraduate programs. It also promotes the holistic development of multiple competencies, acknowledging the multifaceted talents and abilities that help postgraduate students succeed. This strategy develops knowledge, skills, and competences to improve organisational performance (Gilley et al., 2002; Ngambi & Chakanika, 2020). By supporting this approach, educational opportunities assist communities in making essential choices to improve individual and communal well-being (Ngambi & Chakanika, 2020). Individual generic development is a common academic issue, especially in higher education (Ploum et al., 2018). However, Scheer (2020) proposes that, to exposes our understanding gap, the need for more research on how Extension Education promotes youth development and how it smoothly incorporates lifelong capacities for learning.

2.0 Principles of Extension Education

The concept of "expansion" or "extension" stems from Latin terms such as "tension," which signifies "expansion," and "ex," which signifies "exit" or "outward movement" (Leagans, 1961). Thus, "development" may be defined as an educational process that adeptly integrates social science concepts with discoveries from the domains of physical and biological sciences (Singh et al., 2018). This combination aims to exert an impact on individuals' cognition, abilities, beliefs, and actions, encompassing both formal education settings and other aspects of their daily lives.

The philosophy emphasizes active participation and practical learning, based on "assisting others, assisting oneself," according to Das & Tripathi (2014). Practical experiences promote desired actions, following "learning by doing" and "seeing is believing." This field covers home sciences, health, home economics, and other important educational topics. Importantly, Jones and Garforth (2005) confirmed that Extension Education is vital to education. The transfer of knowledge, skills, and values between generations is crucial, according to Mwansa et al., (2019).

According to Das & Tripathi (2014) and Ibe & Chukwuma (2022), the major purpose is to empower individuals to enhance the overall quality of their lives. In response to these, Extension Education focuses on practical concepts can be applied outside of traditional educational institutions (Singh & Rai, 2018; Mwansa et al.,2019). However, the core principle of Extension Education remains the development of human resources (HRD), as emphasized by Scheer (2020).

Further research is needed to determine how human resources may integrate general components with the area of Extension Education (Scheer, 2020). The topic of the sustainability of individual generic development has been extensively discussed in the generic discourse, especially in the context of higher education (Ploum et al., 2018). Yet, it is necessary to conduct research from the student's point of view to assess the effectiveness of discourse in recognizing the specific type of competence (Lambrechts et al., 2018). This research also raises doubts about the validity of the generic skills paradigm that was previously established (Ploum et al., 2018).

Developing knowledge of educational processes' purpose and structure is vital for learning and addressing community and personal requirements (Mwansa et al.,2019; Nisha, 2006; Chakanika et al., 2016). Integrating youth into groups of researchers and utilizing effective research procedures may enhance youth development and improve academic research

on juvenile issues (Powers & Tiffany, 2006). Lawson & Lawson (2013) define youth participation as ecological pressures on organizational structure and educational goals. This supports Zyngier's (2008) assertion that learning may benefit youth by allowing them to explore ideas outside of school.

3.0 Practice of Extension Education

Research and postgraduate self-efficacy debates usually focus on the workplace, psychology or counselling, doctorate education, adult age group, and medicine or nursing self-efficacy. Limited data exists on how postgraduate degrees like Master's and Doctor of Philosophy programs affect youth self-efficacy. Van Blankenstein et al., (2019) purposed that, during these proses of learning, the skill elements like, writing, evaluating, and editing among youth research and experiments may boost students' self-efficacy. He also showed that the interrelated criteria reveal the student's intrinsic ability in rewarding situations. Students must stay academically strong during postgraduate study to apply findings to real-world issues. Researchers having a stake in the phenomena being studied collaborate to develop common knowledge (Orlowski et al., 2015). Youth may practise and enhance their research and communication abilities using this material. This learning process should include youth to understand their difficulties and talents (Hawke, 2020).

In the process of learning, self-efficacy plays a vital role in formal education by being utilized to cultivate a range of talents and assess learning progress (Cahyani & Winata, 2020). Self-efficacy in Cognitive Theory (1986), is defined as the cultivation of an individual's self-worth and their capacity to effectively adjust to changes in their environment through diverse activities. According to LaRocca (2017), during the process of learning, every person establishes objectives to deal with a variety of circumstances, particularly those pertaining to academic matters and behaviors that impact societal development. The process of establishing these objectives typically relies on the four core principles of Self-efficacy Theory; (1) Mastery Experience, (2) Vicarious Experience, (3) Verbal Persuasion, and (4) Affective State (Bandura, 1997). The development of self-efficacy necessitates intrinsic factor that drives efforts towards accomplishing a goal, and this element is crucial in the process of acquiring knowledge, particularly in e-learning settings (Pumptow & Brahm, 2020). Serin (2018) emphasizes the importance of intrinsic factors in developing personal skills, but Saygili (2018) emphasizes the importance of external influences, as known as the ecological system, in creating a conducive environment for self-development. Self-efficacy and ecological support are interdependent; therefore, any self-development goal must be achieved with a balance between internal and external elements. In essence, recognizing and resolving intrinsic and external factors creates a positive environment for self-development.

In the context of this discussion, the influence of the ecological system on the life path of an individual must be considerable, even if the relationship does not occur directly in the process of human development (Bronfenbrenner, 1979). Pittenger et al. (2016) believe that the ecological system influences a human being's life path and personal development beyond direct interactions. Consequently, even when the relationship between the individual and the environment remains unclear, the ecological system influences an individual's growth. This perspective suggests that the ecological setting influences personal growth in a subtle and pervasive way beyond explicit links. This highlights the interaction between one's belief in their own abilities, the impact of the surrounding environment, and the importance of a nurturing setting in promoting comprehensive personal growth. It highlights that general growth is a lifelong journey for everyone, beyond occupational skills. Self-efficacy, influenced by the ideas of Cognitive Theory, plays a crucial role in this process, as individuals face difficulties, seek educational goals, and adjust to new circumstances. The plea for ecological assistance highlights the interdependence between human development and external factors that determine an individual's path toward a satisfying and harmonious life.

According to Van Blankenstein et al. (2019), it is emphasized that if youth are provided with opportunities and autonomy that can be practiced through the research process, it indirectly strengthens self-efficacy. This is especially true when it comes to the development of significant relationships and the cultivation of a strong sense of social dependence. It is possible to shape the capacity to acquire generic abilities by encouraging youth to actively design solutions to tackle each activity, which is a process known as self-regulation (Jain & Dowson, 2009; Jansen et al., 2019). To put it another way, self-regulation is an approach that has the potential to foster active generic learning, particularly in learning contexts that are dependent on the utilization of online technology (Littenberg & Reich, 2020).

Wong and Cheung (2020) claim that generic skills are not just necessary to meet the demands of the marketplace, but also play a role in shaping and propelling an individual's abilities to ensure a more comprehensive self-development in response to environmental innovations. According to Richardson et al. (2012), Vogel & Human (2016), and Panadero (2017), integrating the Self-efficacy and Self-regulation approach can improve academic performance and knowledge development across learning scenarios. This integration highlights the need to merge one's beliefs in their ability to succeed with the skill of regulating their learning process. This approach provides a comprehensive framework for improving overall competence.

As stated by Soobard et al. (2018), helping youth make the most of their abilities is a vital approach to maximizing their potential. Concurrently, it is crucial to carry out meticulous assessments to guarantee the holistic advancement of all aspects of their capabilities. But educational research provides a means of experiencing and understanding the process of strengthening (Salehi et al., 2013; Garavand et al., 2014). Research spaces, which serve as a practical medium that indirectly fosters the development of generic abilities, enable free involvement between youth and adults, thereby developing trust between these two generations. It is essential for youth, particularly those in postgraduate circles, to understand the importance of investigating the function and requirements of the community through successful research efforts. Their knowledge puts them in a position to play a significant role in advancing scientific services, bringing about constructive social change, and formulating important policy choices (Tiyuri et al., 2018; Racheal et al., 2019). The primary focus is on the significant capacity of youth to drive positive societal change and contribute to informed policy-making through active involvement in research processes.

In the context of the debate on youth development, it is essential to acknowledge the significance of the strategy of providing a practical space for the application of skills in settings that are representative of the actual world (Wu et al., 2016). This is because the most important goal of the learning process is not to achieve excellent results; rather, the focus is on how this process can be applied in real-world practical settings to cultivate a sense of responsibility and awareness that their actions will determine the level of success that can be achieved (Peréa et al., 2019). This viewpoint is consistent with Lerner et al. (2007)'s Positive Youth Development that requires three critical components for holistic youth empowerment, according to this paradigm. The key elements encompass enduring favorable exchanges between adults and young adult, skill-oriented activities, and the active involvement and leadership responsibilities of the youth. According to Lerner et al. (2005), activities or programs that apply these three components indirectly support the development of the "5C" elements, which are factors that compose positive youth development leading to effective adult development. The PYD program's goals and outcomes are aligned with five key components: competence, confidence, character, connection, and caring (Lerner, Fisher & Weinberg, 2000; Roth & Brooks-Gunn, 2003). Through strategic integration of these components, youth development can be effectively promoted, and scientific research on themes that impact the lives of young individuals can be advanced.

Based on this discussion, youth development can also be viewed through the lens of advancing research prospects. This serves as a practical approach that opens a forum as part of a research partner and it also allows for active participation during the learning process, which is seen as a methodological approach (Jagosh et al., 2012; Simonds et al., 2013). Furthermore, according to Peek et al. (2016), this activity is also considered to be a democratic strategy that is capable of fostering youth participation in the research process. The primary focus is to establish a comprehensive and cooperative atmosphere that enables youth to actively participate in research initiatives and their growth process.

4.0 Conclusion

This concept paper aims to contribute to the existing knowledge in the area of Extension Education by discussing how this principle enhance youth development throughout the Postgraduate programs. The underlying principle of this discipline is to enable the transmission of communication, skills, and values from one generation to the next (Mwansa et al., 2019), with a particular emphasis on the youth demographic. Extension Education is considered an excellent platform for nurturing and enhancing this potential (Kelsey & Hearne., 1963; Ibe & Chukwuma, 2022). Engaging youth in postgraduate programs can be a valuable component of the PYD program, especially in the field of research. This program offers various mutual benefits, such as the development of skills, empowerment and socialization of youth, enhanced opportunities, and increased validity of research in the context of the environment.

Within the context of this discourse, it is evident that involving youth in research programs may enhance their belief in their own abilities and external drive provided they are granted options and independence. Van Blankenstein et al., (2019) found that this technique fosters both interpersonal connections and a sense of positive social interdependence among individuals. This underscores the need of maintaining a harmonious equilibrium between external and inner factors to promote comprehensive human growth. The achievement of consistent and exceptional learning outcomes is predominantly contingent upon the learning environment. As per the studies conducted by Jansen et al. (2019) and Jain & Dowson (2009), students have the ability to enhance the learning process by independently organizing, planning, and managing their actions. This methodology empowers pupils to attain the desired objective.

The initial stage in assisting youth individuals to realize their maximum capabilities is by offering them assistance in recognizing and cultivating their talents. Establishing credibility and fostering contact between youth and adults in the framework of education and research without borders is crucial to developing this generation's potential and advancement. It is crucial for the youngest generation, especially those in graduate degrees, to recognize the significance of employing the research process to investigate the requirements and functions of the community. Acquiring this information is crucial since these youth people will play a leading role in promoting scientific progress, driving social development, and shaping future policy-making. This technique is endorsed by scholars who emphasize the profound impact of reliable relationships between young people and adults on the broader domains of knowledge and social progress.

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Kajian Eksplorasi Pelaksanaan Program Pendidikan Individu (IEP) di Sekolah dalam Hospital

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Abstrak

Program Pendidikan Individu (IEP) ialah rancangan bertulis yang akan menerangkan program dan perkhidmatan khas yang diperlukan oleh murid untuk berjaya. Hal ini selaras dengan Tujuh Teras Utama Kementerian Pendidikan Malaysia (KPM) tidak ada murid tercicir daripada pendidikan. Kajian ini bertujuan untuk menerokai pengalaman terhadap empat tema seperti ibu bapa, murid SDH, guru dan pihak perubatan di Sekolah Dalam Hospital (SDH). Reka bentuk kajian merupakan kajian kes yang akan digunakan adalah protokol temu bual bagi mendapatkan data daripada guru-guru SDH. Data dianalisis secara tematik dengan bantuan perisian ATLAS.ti. versi 9 dan seterusnya dirumuskan dalam bentuk rajah berkaitan pelaksanaan EIP yang dialami dalam pelaksanaan IEP di SDH. Dapatan kajian ini membantu mengenal pasti amalan terbaik dalam mencipta dan melaksanakan IEP. Tinjauan kajian ini boleh membawa kepada intervensi pendidikan yang lebih berkesan kepada murid di SDH.

Kata kunci: sekolah dalam hospital, Program Pendidikan Individu (IEP)

1.0 Pengenalan

Pada dasarnya, sistem pendidikan di negara kita menjadi penumpuan terhadap dasar pendidikan demi melahirkan manusia yang sempurna dari segi jasmani, emosi, rohani dan intelek dalam sesebuah masyarakat berdasarkan Falsafah Pendidikan Kebangsaan. Bagi merealisasikan konsep yang dinyatakan dalam Falsafah Pendidikan Kebangsaan, pembelajaran sepanjang hayat diperkenalkan secara meluas dan dapat dilihat dalam pelaksanaan penubuhan Sekolah Dalam Hospital (SDH). Objektif SDH adalah memastikan pendidikan murid tidak terjejas walaupun dirawat di wad dan terus dipelihara selaras dengan matlamat Education for All (EFA) iaitu hasrat yang diperjuangkan oleh UNESCO (United Nations Education Scientific and Cultural Organization). Sejurus ini, sistem pendidikan yang dilaksanakan melalui sistem sekolah adalah elemen terpenting bagi sebuah negara dalam menghasilkan warga berdaya saing, berilmu dan berpengetahuan luas pada abad ke-21 ini (Huzaimi et al, 2020).

Program Pendidikan Individu (IEP) adalah dokumen yang ditulis untuk memenuhi pembelajaran individu pelajar keperluan. IEP adalah rekod bertulis yang menyediakan rancangan pembelajaran secara individu berdasarkan kekuatan dan kelemahan murid berkeperluan khas (Kod Amalan Pendidikan MBK, 2015). IEP berfungsi sebagai dokumen untuk menentukan kerjasama dan kolaborasi antara sekolah, ibu bapa, murid dan, pegawai pendidikan daerah, dan individu dari agensi lain atau perkhidmatan sokongan. Guru pendidikan

khas diperlukan untuk menyediakan IEP untuk setiap murid berkeperluan khas (Peraturan Pendidikan Khas, 2013).

Program IEP ini dapat dimanfaatkan dalam perancangan, pemantauan dan penilaian pendidikan untuk murid berkeperluan khas. Oleh itu, kerajaan Malaysia, melalui kolaborasi antara KPM dan United Nation Children's Fund (UNICEF) telah membangunkan sistem IEP dalam talian atau dikenali sebagai e-RPI dengan tujuan untuk memperbaiki dokumen Rancangan Pengajaran Individu (RPI) sebelum ini. e-RPI yang akan berfungsi berdasarkan laman web atau rangkaian portal dapat memudahkan guru pendidikan khas untuk merancang dan melaksanakan IEP dengan berkesan. Selain itu, manual pengguna e-RPI juga telah disediakan oleh KPM untuk membantu semua sekolah atau sekolah berkeperluan khas seperti SDH yang menawarkan Program Pendidikan Khas Bersepadu atau yang dikenali sebagai Program Pendidikan Khas Integrasi (PPKI) dapat menggunakan sistem e-RPI dengan tepat. Walaupun manual penyediaan laporan IEP telah disesuaikan, masih banyak sekolah di Malaysia yang tidak pernah melaksanakan IEP (Sitti Hasnah, 2012).

IEP menerangkan bagaimana murid berkeperluan khas belajar, bagaimana mereka memberi contoh apa yang telah dipelajari dan apa yang dilakukan oleh guru dan penyedia perkhidmatan untuk membantu anak-anak ini belajar dengan lebih berkesan (Adibah 2014). IEP juga digunakan sebagai pengubahsuaian program pembelajaran dan perkhidmatan yang diberikan kepada murid (Jabatan Pendidikan Khas, 2005). Garis panduan pelaksanaan IEP terdapat dalam Buku Panduan IEP Jabatan Pendidikan Khas, Kementerian Pendidikan Malaysia. Menurut Zainal Abidin (2010), mendapati bahawa penggunaan IEP oleh guru untuk pelajar berkeperluan khas menjadikan proses pengajaran dan pembelajaran lebih teratur, sistematik dan membantu guru bagi mengikuti perkembangan murid berkeperluan khas. Pelaksanaan IEP membantu guru merancang pelajaran harian di dalam kelas (Sahin 2012). Hal ini disokong oleh Ismail (2008); Sahin, (2012) & Timothy & Agbenyega, (2018) bahawa program ini membantu pelajar berkeperluan khas membantu KPM untuk memudahkan pendaftaran pelajar berkeperluan khas ke Program Pendidikan Inklusif (Siti Nor Maisarah & Mohd Hanafi, 2016).

Oleh itu, pelaksanaan IEP adalah bahagian penting dalam pembelajaran dan pemudahcaraan (PdPc) di SDH. kajian ini dilakukan untuk meneliti keberkesanan pelaksanaan IEP dan cabaran guru mengenai kesan pelaksanaan IEP dalam meningkatkan pencapaian murid SDH yang tidak dapat melanjutkan pelajaran di sekolah harian biasa. Kajian ini memberikan gambaran menyeluruh mengenai kepentingan melaksanakan IEP untuk murid SDH yang menjalani rawatan di hospital dengan mencapai 7 teras utama KPM iaitu tiada keciciran pendidikan.

2.0 Tinjauan Teori dan Sintesis Literatur

Individualized Education Program (IEP) dikenali sebagai Program Pendidikan Individu adalah dokumen bertulis yang dapat menggambarkan program dan perkhidmatan khas yang diperlukan bagi murid di persekitaran pembelajaran yang paling sesuai (Avcioglu, 2015). Sejurus itu, IEP memberikan perkhidmatan sokongan seperti perkhidmatan terapi yang sesuai untuk perkembangan murid (Avcioglu, 2015; Baysen & Dakwo, 2018). Hal ini disokong oleh Rotter (2014) mengatakan bahawa IEP adalah salah satu komponen penting dalam menyediakan perkhidmatan pendidikan khas untuk murid. Oleh itu, keberkesanan Program IEP dapat memenuhi teras pendidikan untuk semua murid. Program IEP juga menerangkan cara murid berkeperluan khas memenuhi keperluan pembelajaran, cara mereka berkomunikasi semasa sesi

PdPc yang dipelajari dan apa yang dilakukan oleh guru dan penyelia untuk membantu anak-anak ini belajar dengan lebih berkesan (Adibah 2014). IEP juga digunakan sebagai pengubahsuaian program pembelajaran dan perkhidmatan yang diberikan kepada pelajar (Jabatan Pendidikan Khas, 2005). Garis panduan pelaksanaan IEP terdapat dalam Buku Panduan IEP Jabatan Pendidikan Khas, Kementerian Pendidikan Malaysia. Zainal Abidin (2010).

3.0 Pelaksanaan Program IEP di SDH

Pelaksanaan IEP di sekolah bergantung kepada 6 fasa yang dilaksanakan di Sekolah Pendidikan Khas. Fasa Pertama ialah kemahiran ibu bapa. Ibu bapa yang mempunyai kemahiran boleh membantu anak mereka dalam pembelajaran dan juga dari segi penjagaan anak. Ibu bapa yang mempunyai kemahiran boleh 7 membantu guru dalam membina atau menggubal IEP untuk kegunaan pengajaran di sekolah. Secara tidak langsung kemahiran ibu bapa boleh membantu pelaksanaan IEP di sekolah secara lebih berkesan. Fasa kedua ialah komunikasi. Menurut Epstein et al. (2002) komunikasi berkesan merujuk kepada perhubungan dua hala berkaitan perbincangan pencapaian murid dan juga perkembangan sekolah. Komunikasi sangat penting antara ibu bapa dan guru untuk mengetahui perkembangan pembelajaran murid. Guru perlu memaklumkan perkembangan murid dan tugas-tugas yang diberikan. Begitu juga dengan ibu bapa perlu memberitahu guru tentang perkembangan murid di rumah. Komunikasi dua hala ini boleh berbentuk mesyuarat, perbincangan, telefon pintar dan media sosial. Hasil komunikasi ini boleh membantu guru dan ibu bapa menetapkan objektif dan penggunaan strategi pembelajaran dalam IEP. Fasa yang ketiga ialah pembelajaran di rumah yang sememangnya dipantau oleh ibu bapa. Guru menyediakan kerja yang perlu dilaksanakan di rumah. Dalam konteks ini, ibu bapa perlu membantu anak mereka di rumah agar dapat mengurangkan masalah-masalah semasa merancang IEP. Fasa keempat ialah kesukarelawan iaitu kesanggupan ibu bapa atau ahli komuniti untuk membantu pihak sekolah menjayakan pelaksanaan IEP di sekolah. Ibu bapa yang mempunyai kemahiran bolehlah menyumbang dengan memberi idea-idea untuk pelaksanaan IEP.

Selain itu ibu bapa juga boleh memberi bantuan dalam penyediaan bahan bantu mengajar. Ibu bapa boleh datang ke sekolah untuk tujuan melakukan kerja-kerja sukarela yang diatur oleh guru. Hasil kerja-kerja sukarela ini boleh membantu guru SDH melaksanakan IEP dengan lebih berkesan. Fasa yang kelima ialah membuat keputusan. Pelaksanaan IEP adalah berdasarkan mesyuarat. Dalam mesyuarat, ibu bapa diberi peluang dan kepercayaan untuk membuat keputusan berkaitan dengan pembinaan serta pelaksanaan IEP di sekolah. Dalam proses membuat keputusan, ibu bapa, sekolah dan guru akan bekerjasama, bertukar-tukar pendapat demi melaksanakan IEP dengan lebih berkesan. Faktor yang keenam ialah kolaborasi dengan komuniti. Pelaksanaan IEP memerlukan sokongan dari semua pihak iaitu ibu bapa, guru, sekolah, ahli-ahli kumpulan sokongan yang mempunyai kemahiran. Kesemua pihak bekerjasama menggubal IEP dengan mengadakan kesemua pengetahuan dan kemahiran yang ada. Dalam konteks ini berlakunya timbal balik antara semua pihak demi memastikan proses pelaksanaan IEP. Ilmu pengetahuan dan kemahiran semua pihak yang terlibat dikolaborasikan menjadi satu panduan untuk pelaksanaan IEP di sekolah. Secara keseluruhan model Epstein sangat sinonim dengan pelaksanaan IEP di sekolah. Keenam-enam Fasa tersebut menyumbang kepada keberkesanan pelaksanaan IEP di sekolah. Guru dan ibu bapa mendapat banyak idea dan yang paling penting ialah kesannya kepada pelajar tersebut. Pelajar akan mendapat banyak manfaat hasil dari gabungan keenam-enam faktor dalam model Epstein et al. (2002).

4.0 Implikasi Kajian

Kajian ini juga penting untuk para guru melihat sendiri murid mereka terhadap pengajaran mereka. Dengan ini secara tidak langsung ianya akan membuka jalan kepada para guru untuk berbuat sesuatu bagi mengubah cara dan memperbaiki mutu pengajaran mereka. Di samping itu, melalui hasil kajian ini, diharapkan pihak sekolah dan kementerian dapat mencari jalan terbaik

bagi melahirkan guru yang sentiasa bersedia untuk menajalankan tugas mereka sebagai seorang pendidik dengan penuh tanggungjawab dan komited. Kajian yang dilakukan terhadap SDH terhad oleh para penyelidik sebelum ini. Oleh itu, kajian terhadap SDH yang berunsurkan kesediaan guru dalam pelaksanaan pengajaran sewajarnya dilakukan agar golongan masyarakat dapat merealisasikan kepentingan SDH di seluruh Malaysia.

Kajian ini dapat memberi input positif dalam kesediaan pengajaran dan pembelajaran kepada warga pendidik terus berjuang mendidik murid walau apa jua persekitaran. Sejurus ini, kajian ini dapat mendorong guru sekolah harian untuk sedia berkhidmat di SDH bagi memenuhi tenaga pengajar di SDH seluruh negara. Selain itu, faktor sosial memainkan peranan penting semasa pelaksanaan pengajaran dimana membantu mengalakkan interaksi antara guru dan murid lebih rapat di persekitaran yang kondusif.

5.0 Kajian Masa Hadapan

Kajian Program IEP pada masa depan adalah penting untuk memastikan sistem pendidikan dan perkhidmatan sokongan bagi memenuhi keperluan murid yang dirawat di hospital. Selain itu, kajian ini boleh melibatkan penyelidikan tentang kepentingan pendidikan, sokongan kesihatan, sokongan komuniti, dan peluang pekerjaan. Kajian-kajian IEP sebelum ini lebih berfokuskan kepada tahap prestasi murid dan pencapaian sekolah. Maka kajian tentang IEP perlu diperluaskan secara seluruh dengan membuat penyelidikan tentang pasca murid SDH yang telah melalui Program IEP dari segi kerjaya, amalan baik murid dan gaya kehidupan mereka pada masa depan.

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An Experimental Study on Improving the Learning Effectiveness of Students in Vocational College through the Dual System

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Abstract

As a model of vocational education in Germany, the dual system has trained many talents who adapt to social and technological development. Over the past 30 years, China has gradually implemented the German dual system in vocational colleges, reformed teaching, and implemented college-enterprise cooperation in vocational education. This study aims to address the issue of relatively weak knowledge levels among students majoring in automobile application technology from Western China. It attempts to determine students' learning effectiveness by applying the dual system in professional courses. This study adopts a quasi-experiment design, with these students as the research subjects, and they are divided into an experimental group and a control group. During the teaching course automobile electrical equipment maintenance, the experimental group students were intervened with a German dual system, while the control group students did not receive any intervention. After conducting a dual system teaching intervention on the course, the experimental and control groups were tested, and the data was statistically analyzed. Based on the statistical results, it was found that students who used the dual system teaching method had higher course grades, employment rates, pass rates of job qualification certification, and popularity among enterprises.

Keywords: vocational education; dual system; automotive professional courses

1.0 Introduction

The dual system originated in Germany and ensured the high quality of German workers, the development of German technology, the rapid rise of industry, and the economy soaring (Blossfeld, 1992). The dual system in Germany is a typical vocational education model in which colleges and enterprises work together to cultivate talents through collaboration. It is also one of the most effective forms of college-enterprise cooperation and a combination of engineering and learning. The characteristics of its duality can be summarized (Wan, 2008) as follows:

1. The implementation subjects of teaching are vocational colleges and enterprises.
2. Enterprises and vocational colleges jointly serve teachers.
3. Students are both vocational college students and corporate apprentices.
4. The practical training textbook comprises several teaching unit modules based on the occupational category, each consisting of a teacher reference book, a student exercise book, and an exercise guidebook.
5. Vocational training work is mainly completed by enterprises (Wilson, 2000), while vocational colleges complete the theoretical and general knowledge required for the profession.
6. On the one hand, the qualification certificate issued by the Automobile Repair Industry Association; On the other hand, there are graduation certificates issued by vocational colleges and training certificates issued by enterprises.

7. The basis for implementing teaching in enterprises is the training rules set by the federal vocational education. In contrast, vocational colleges implement theoretical teaching by the curriculum standards issued by the Ministry of Education in their respective regions. The dual system concept in Germany can be considered as a summary of national legislation, industry regulation, college-enterprise cooperation, and teacher-apprentice inheritance.

The dual system is a vocational education system that focuses on college-enterprise cooperation and trains skilled talents. Developing college-enterprise cooperation is also a breakthrough point for vocational education to improve the cultivation of technical talents, which is conducive to forming the vocational education system. Under the premise of vigorously developing cooperation between colleges and enterprises in various vocational colleges, the role of enterprises in education has become even more critical. In addition, the learning activities of dual system teaching are the reproduction of natural work scenes, which also achieve the accuracy, objectification, and real-life reproduction of work tasks to a certain extent. In vocational education, colleges attach great importance to cultivating students' abilities while implementing the dual system.

In vocational college, it is essential to give students social recognition and strengthen the cultivation of their abilities, especially in terms of improving their learning Effectiveness, which will benefit them greatly in the future, as learning effectiveness is the primary criterion for measuring education (Swan,2003). Mbarek & Zaddem(2013) also defined learning effectiveness as a trainees' knowledge, skills learned in a training session, and their practical application on their job. Learning effectiveness is the overall process of students' high-quality participation in learning. It can be measured that in vocational education, learning effectiveness is not only the score of learning but also the extent of adaptation of students to the enterprise and their performance. Such students can master the professional skills and knowledge required by the market in college and obtain vocational job qualification certification. Students adapt to the constantly changing job tasks in the market after graduation, which is also the training goal of vocational education.

2.0 Problem Statement

The dual system has played a crucial role in developing vocational education, and many vocational colleges in China are also applying and piloting the dual system. For students in underdeveloped regions and cities, due to their relatively weak knowledge, learning professional courses well and solidly and combining them with practical work has put forward specific requirements for teaching models and methods (Haasler, 2020). For such students, paying more attention to practical operations is a suitable teaching method. From the perspective of enterprises, one of the goals of vocational education is to cultivate such students in a targeted manner based on their actual work tasks. In most existing studies, many have emphasized the overall application of the dual system in talent cultivation from a macro perspective, such as adjusting the academic system, alternating student internship time, and arranging student on-the-job internships. This study focuses on the design and implementation of the dual system in professional practical courses and, more importantly, introduces and leverages the role of enterprises in teaching. This is the application of the dual system. The dual system experimental research in the course not only ensures the improvement of student's professional abilities but also cultivates skilled talents that meet the needs of enterprises due to the diverse participation of enterprises (Durazzi & Benassi, 2021). Through this study, the following questions will be determined:

- (1) Adopting a dual system in the course improves students' grades.
- (2) Adopting a dual system in the course improves the pass rate of job qualification certification.
- (3) Adopting a dual system in the course improves students' employment rate.
- (4) Adopting a dual system in the course makes students more popular among

businesses in their employment.

3.0 Methodology

This study utilized the quasi-experiments design, and three conditions should be met when selecting the college where the experimental group students are located: (i) The college has experience in Sino-German cooperation in education, (ii) The college has a Western source class (students come from underdeveloped cities in western China, such as Xinjiang, Yunnan, Guizhou, Tibet, Gansu, etc.), and (iii) These students study majors related to automotive application. Based on these three conditions, an educational experimental study was conducted on the Western Yunnan source class of a vocational college in Shanghai. Randomly divide students into a control group and an experimental group. The control group (17061) comprises 25 students in a regular teaching class, while the experimental group (18061) comprises 28 students. Due to professional reasons, all students are male. After random grouping, students will be informed of the specific content of this study.

The educational experiment of this study is the application of dual systems in the core course of the automotive application major. Automotive Electrical Equipment Maintenance, as the essential course, will take one semester (spanning about four months) to teach, with a total of 204 class hours (40 minutes per class). Part will be completed in college, with 8 class hours (one day) per week for 15 weeks of study. The course will be taught alternately by teachers at college and enterprise.

Additionally, 84 class hours for three weeks of group practice will be completed in the enterprise. The participation of enterprises in teaching this course is shown in the figure 1.

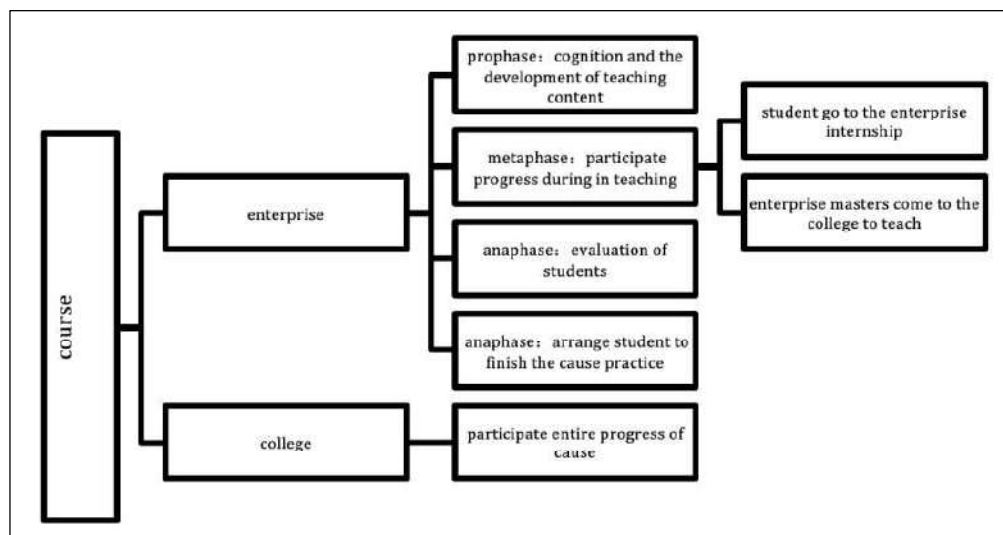


Figure 1. Participation of Enterprises in Course Implementation Progress

To meet the principle of the dual system, the teaching content will be tasked based on the real needs of the enterprise according to its work tasks and job capabilities (Kirchknopf, 2020). The content of the automotive electrical equipment maintenance course is divided into five learning modules, with each module setting 2 to 4 work tasks. Each work task has strong hands-on operability, and there are safety prompts, information sheets, and worksheets at the beginning of the task. After students complete the work task, there is also a corresponding evaluation table. The primary process of the teaching process is following safety tips → task introduction →, student group discussion and decision-making → analysis of the work process → completion of work tasks → evaluation. The teacher guides, supervises, and controls the whole process, and

students also master corresponding knowledge points during the task completion process.

Data statistics were conducted after the experimental course teaching using the dual system. The data mainly came from students' course grades, pass rates of job qualification certification, and questionnaires. In addition, interviews were conducted with the staff of the enterprise where the students interned to obtain the most direct feedback on the learning effectiveness of the experimental group of students.

4.0 Findings

In Figure 2, the horizontal axis represents the fractional interval, and the vertical axis represents the number of people. The highest and lowest grades are the same. The average score of the control group (17061) is 71.05(Percentage Grade) in the experimental group (18061), while the average score is 78.70. The one- time pass rate is 100%. Most students who have undergone dual systems can grasp the knowledge points, and their scores conform to a normal distribution after passing the overall evaluation of multiple projects.

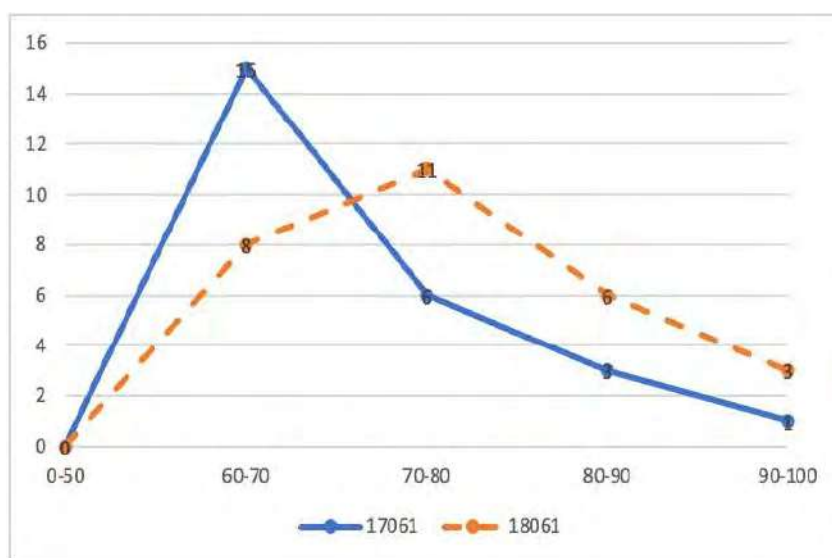


Figure 2. Score Distribution Between 17061 and 18061

Students under the dual system can integrate into the corporate environment in advance, from participating in corporate cognition and internships to entering the company for on-the-job internships. They also received praise from the company, with 27 students from the 18061 experimental group interning at a Shanghai automotive maintenance and manufacturing enterprise. They will have a two-way choice and can still choose to continue their internship in the company after graduation, with a corresponding employment rate of 96.43%. After the Ministry of Labor and Social Security exam, the experimental group's (18061) job qualification certification passing rate is 100%, while the control group is 92%.

In interviews with teachers (technicians from the enterprise) and management personnel of enterprises, it can also be seen that the Master of Enterprises favors students who have had experience in dual system learning, especially during this process when the enterprise also participates in the teaching of courses. They believe that such students are quick to learn, good at work, and less to training, reducing the training costs for new employees in the enterprise. At the same time, the manager also proposed that students who adopt the dual system teaching method to carry out courses are more likely to form a favorable cooperative relationship with

the enterprise, become familiar with the student's background, have a more systematic grasp of knowledge, and the enterprise is also more likely to retain talents. Overall, there is an advantage in comprehensive quality, as students not only study in college but also participate in project operations in enterprises, so they can work on the job and have higher competence. The interview shows that when selecting employees, the masters and HR of enterprises value students' skill levels and have experienced teaching under the dual system.

5.0 Findings

The implementation effect of the dual system during automobile electrical equipment maintenance is reflected in (i) In teaching, the most noticeable aspect is that the dual system is conducive to enhancing students' interest and actively mobilizing their learning enthusiasm, especially for students in Western Yunnan, China. It does fundamentally solve the problem of vocational education. At the same time, it also cultivates students' comprehensive competence. (ii) From the results, the overall performance of students has significantly improved, and the enterprise's personnel, teachers, and technical managers are delighted with the students cultivated by the dual system. (iii) Colleges and enterprises have developed positive, cooperative relationships, and the integration between students and enterprises has progressed from indirect to direct.

Working together from multiple aspects and perspectives is recommended for future reform and application of the dual system in course teaching. (i) In terms of colleges, it is necessary for them to establish specific systems and apply for funding support, which is conducive to the smooth development of college-enterprise cooperation and the employment of students in the future. (ii) On the enterprise side, combining teaching with the enterprise's needs, job market, and job requirements can effectively provide specific implementation steps and plans for the dual system, making teaching targeted. (iii) Regarding teachers. Teachers can use a dual system to improve student's learning effectiveness in enterprises or colleges and jointly cultivate them into skilled talents.

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Integration of Digital Learning to Enhance Higher Order Thinking Skills (HOTS) Among Elementary Students in Science Education

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Abstract

Educational process in 21st Century should emphasize learning to improve Higher-order Thinking Skills (HOTS), provide rich and authentic experiences to question, challenge, explore, develop deep knowledge and understanding, and produce imaginative and innovative people. Based on preliminary research, several problems and needs related to elementary school science education have been collected. The issue found is the lack of teaching materials that facilitate the development of students' high-level thinking skills, which allows students to learn science independently and further improve their knowledge. This study investigates the utilization of the integration of digital learning to improve HOTS among students. Digital learning, in many ways, has beneficial effects on students and communities. To improve the level of learning according to the in line with teacher's qualifications, it is currently important to create incorporate digital learning to improve the HOTS among primary school students.

Keywords: digital learning, science education, elementary school, HOTS

1.0 Introduction

Several elements can influence the effectiveness of the learning process, and within this context, environmental factors have been recognized as a substantial determinant (Zhang et al., 2020). Creating a favourable environmental atmosphere can be achieved by the utilization of technological media (Aka, 2017; Rulyansah & Wardana, 2020). Prior research (Blundel et al., 2016; Aziz et al., 2019; Phong et al., 2020; Gan et al., 2022) has established a correlation between educators' use of technology in educational settings and their subjective evaluations of its value. Educators possess the autonomy to employ teaching methodologies of their preference. Certain educators employ the utilization of YouTube as a means of communications with their students and as a platform for disseminating instructional content for review. Conversely, other educators employ various methodologies to achieve the same objective.

Digital learning, also known as e-learning, offers numerous benefits, has become increasingly popular in education. Some of the advantages of digital learning include allowing students to access educational materials and participate in classes from virtually anywhere, making it suitable for learners of all ages, including working adults and those with busy schedules (Lin et al., 2017). It also breaks down geographic barriers and provides access to high-quality education to people in remote or underserved areas. It also makes education more accessible for individuals with physical disabilities.

Cohesively, elementary school education must remain current to provide a comprehensive and dynamic learning experience that aligns with the evolving societal landscape. Education in the 21st century, commonly referred to as the period of Industrial

Revolution 4.0, is characterized by the simultaneous integration of digital technologies and the cultivation of 21st-century learning skills. The talents deemed essential in the 21st century, sometimes known as communication, collaboration, critical thinking, and creativity skills (4CS), encompass creative thinking, critical thinking and problem-solving, communication, and teamwork (Partono et al., 2021). The development of learning plans that incorporate 4CS activities has been identified as a crucial factor in facilitating the acquisition of 21st-century skills by educators (Septikasari & Frasandy, 2018).

2.0 The Significance of Digital Learning in Science Education

Developed nations have always been closely linked with scientific and technological progress. A significant portion of this advancement can be attributed to their ongoing evaluation and comprehension of the process of developing the science curriculum. The objective of this initiative is to enhance proficiency in the fields of science and mathematics across various age cohorts, encompassing preschool learners as well as individuals pursuing higher education (Razali, 2021).

Previous studies have highlighted the considerable significance of science in relation to employment, particularly its global implications (Gottfried et al., 2016). Additionally, it has been recognized as a means to enhance the socio-economic status of a nation (Paige, Zeegers, Llyod, & Roetman, 2016), maintain technological stability (Onyekuru, 2015), and enhance the quality of science curriculum development (Fensham, 2016). However, it is imperative to acknowledge various elements that contribute to the development of scientifically literate students that possess a genuine interest in science, hence fostering a high calibre workforce of professionals.

On the other hand, digital platforms offer interactive simulations that allow students to experiment with scientific concepts and phenomena in a safe and controlled environment. This hands-on experience helps students grasp complex ideas more effectively (Bellou et al., 2018). Not only that, digital science education incorporates multimedia elements like videos, animations, and interactive graphics. These visuals make scientific concepts more engaging and memorable, helping students comprehend and retain information more effectively.

Furthermore, digital learning also can facilitate collaborative learning experiences, where students can engage in discussions, group projects, and peer-to-peer interactions. Collaboration enhances student's critical thinking and problem-solving skills. Digital learning also enables self-paced learning, allowing students to progress at their own speed (O'Haver, 1991). This personalized approach accommodates various learning styles and abilities, ensuring that no student is left behind.

3.0 Issues and Challenges

According to Kenedi, Ahmad, Sofiyan, and Helsa (2019), it is imperative for individuals, including elementary school students, to acquire the necessary skills relevant to the 21st century. According to Hamimah, Zuryanty, Kenedi, and Nelliarti (2019), elementary schools serve as the initial official educational establishments dedicated to fostering fundamental concepts and skills. The imparting of 21st-century skills to elementary school students is widely seen as significant because these foundational concepts and competencies are intended to facilitate the advancement of students throughout their secondary education. Moreover, in order to facilitate the attainment of the predetermined educational goals by elementary school students, it is imperative that they cultivate the essential proficiencies required in the 21st century.

However, the preliminary aptitude assessment conducted by Zainil et al. (2023) in five elementary schools indicated a deficiency in the 21st-century skills of students at the elementary

level. The student achieved an average score of 56.78, indicating a low degree of proficiency in 21st-century abilities. (Abualrob, 2019; Asrizal, Yurnetti, & Usman, 2022; Jannah, Prasajo, & Jerusalem, 2020; Perdana, Apriani, Richardo, Rochaendi, & Kusuma, 2021; Putra, Wiyanto, & Linuwih, 2020; Rochmawati, Wiyanto, & Ridlo, 2019) have been cited in this text. In order to cultivate the 21st-century abilities of students, it is imperative to address these issues, as elementary school students play a pivotal role in shaping the future.

On the other hand, Zainil et al. (2023) also claim that the insufficient proficiency of elementary school students in 21st-century abilities might be attributed to the imprecise implementation of the learning model by instructors. The proliferation of technological innovations is a defining attribute of the contemporary era. The advancement of this technology also has an impact on students. Elementary school students possess the ability to utilize technological devices such as computers, laptops, and cell phones. This exemplifies the current shift in attitudes and behaviours pertaining to technology inside elementary school settings. The provided response presents a resolution to the problem at hand. In order to effectively cater to the cognitive and behavioral tendencies of elementary school pupils, it is imperative for educators to adeptly integrate and enhance technology-driven learning methodologies. In order to provide elementary school students with the necessary competencies for the contemporary era, educators must establish pedagogical approaches that incorporate technology-enabled instruction.

Hover and Wise (2022), Kong et al. (2014), and Phoon, Idris, and Nugrahani (2021) all argue that incorporating technology into the classroom is an effective strategy for educating students in the modern era. During the fourth industrial revolution, digital classrooms have become increasingly popular (Ariani, Helsa, & Kenedi, 2020). Online education typically takes place in some sort of digital lecture hall. Learning in a digital classroom can be done remotely. Students from all over the world, regardless of their location, can take advantage of the accessibility and convenience of online education. In this investigation, we set out to create a virtual learning environment where instruction in the STEM (science, technology, engineering, and mathematics) disciplines would take precedence. The abbreviation "STEM" is often used to refer to the STEM fields of study. The fields of science, technology, engineering, and mathematics (STEM) were selected for the 21st century for this very reason (Hendri, Handika, Kenedi, & Ramadhani, 2021). Experts support the use of a STEM-focused digital classroom learning strategy. The characteristics of 21st-century learning and the characteristics of elementary school students were taken into careful consideration throughout the design of the digital classroom learning strategy. Accordingly, the researchers argue that teaching elementary school students via digital methods may help them develop skills necessary for success in the modern world.

Besides that, previous research conducted by Yuelin, Yujie, and Xiaohui (2021) has examined the effects of online learning on the academic performance of elementary and middle school students. The findings of the study indicate that online education has the potential to enhance the quality of learning.

4.0 Teaching Approaches

There exist numerous elements that are associated with the academic achievement and level of engagement of students in science disciplines. The factors that influence teaching effectiveness encompass a wide range of elements, including contextual, emotional, and motivational factors, the subjects being taught, the workload imposed on students, the assignments given to students, the personal orientation and skills of the students, the design of the teaching methods, the materials used for successful teaching, the effectiveness of the educator, the teaching skills employed, the motivation of both the educators and the students, the personality of the students, and the class size (Abbasi et al., 2018; Ale, 1989; Armstrong, 2009; Bietenbeck, 2011;

Ehrenberg, Brewer, Gamoran, & Willms, 2001; Harris & Sass, 2008; Kirillova et al., 2017; Kwon, 2016; Rus, Radu & Vanvu, 2016; Say & Bag, 2017; Shcherbakov et al., 2017; Wang & Hsieh, 2015). Hence, it is imperative to select a pedagogical style that considers the inclinations, abilities, and cognitive capacities of pupils, with due consideration to their age and developmental stage. Appropriate instructional approaches facilitate students' comprehension of the course content, while also enabling the acquisition of knowledge and skills, as well as fostering a profound enthusiasm among students (Mat & Yusoff, 2019).

Conversely, there is a need for enhancement in the pedagogical approach to scientific education in elementary schools, specifically targeting the development of HOTS and learning abilities among students. In the absence of a demand, endeavors to enhance the quality of education in the diverse and challenging context of the 21st century lose their competitiveness. When it comes to developing talents relevant to the 21st century, there are three fundamental frameworks: According to Scott (2017), there are three main categories of skills that individuals need to develop: learning and innovation skills, life and career skills, and information, media, and technology skills. The learning and innovation skills encompass a set of abilities that 4CS. Life and professional skills encompass a range of attributes including adaptability, diligence, interpersonal and intercultural competence, productivity and effectiveness, leadership, and responsibility. Finally, the abilities pertaining to information, media, and technology encompass the acquisition and utilization of pertinent data, as well as the effective dissemination of information to a wide audience through various communication channels.

5.0 The Implementation of Digital Learning and Its Relation to Students' Higher-Order Thinking Skills

Digital learning is a contemporary and sophisticated approach that utilizes computer or telephone interfaces (known as human-computer interaction or HCI) along with principles from psychology and digital learning development to enhance human engagement and motivation. The efficacy of digital learning in inducing changes in human behavior has been demonstrated (Pedro et al., 2015). Digital learning has a significant impact on the sphere of education (Lee & Hammer, 2011; Landers & Callan, 2011; Deterding, 2012). According to Kapp (2012), it is expressly mentioned in his publication that the implementation of digital learning methods in the field of education has the potential to enhance students' learning experiences by fostering the development of a range of abilities, including HOTS, 21st-century skills, and problem-solving skills.

6.0 Conclusion

This study offered valuable insights into the experiences of science educators in promoting digital learning to enhance HOTS. The findings of this study suggest that the participants held a strong perception on the integration of digital learning in the context of 21st-century education. Nevertheless, the implementation of digital learning in science education encounters several hurdles. Digital learning has been implemented in Malaysian schools for a duration exceeding five years. There is currently a lack of certainty regarding the implementation of digital learning in classrooms and its ability to achieve its intended objectives. The current investigation has provided valuable insights into the implementation of digital learning in Malaysian schools and the utilization of HOTS by educators. There exists a disparity between the occurrences within classrooms and the actual circumstances.

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Peranan Pemimpin dalam Kelestarian Organisasi Pertubuhan Belia di Malaysia

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Abstrak

Perubahan yang besar telah berlaku dalam organisasi berikutan pandemik Covid-19. Perubahan ini melibatkan dari aspek persekitaran yang merangkumi ekonomi, sosial, politik dan teknologi. Perubahan persekitaran ini telah memberi kesan yang besar terhadap kelestarian organisasi berasaskan keuntungan dan badan bukan kerajaan. Badan bukan kerajaan merujuk kepada sektor ketiga yang bebas, sektor sukrela, sektor kebajikan, sektor sosial, sektor pengecualian, sektor amal dan badan sosial. Oleh itu, organisasi yang turut menerima kesan daripada perubahan persekitaran ini adalah Pertubuhan Belia. Pertubuhan belia merupakan sebuah organisasi bukan kerajaan yang menjalankan aktiviti secara sukarela dan bukan berasaskan keuntungan. Pertubuhan belia merupakan sebuah organisasi yang mempunyai misi dan visi yang jelas. Oleh itu, bagi mencapai matlamat kelestarian organisasi ini, pemimpin terutamanya perlu menerapkan elemen amalan kelestarian dalam mencapai misi dan visi. Prestasi sesebuah pertubuhan belia akan dilihat pada pencapaian misi dan visi dalam pertubuhan belia. Kertas konsep ini akan membincangkan mengenai kajian lepas dalam kelestarian organisasi dan peranan pemimpin dalam mencapai kelestarian organisasi. Teori Sistem turut dibincangkan dalam kertas konsep ini agar dijadikan panduan kepada pemimpin pertubuhan belia untuk memastikan pertubuhan belia mencapai kelestarian organisasi dalam tempoh masa yang panjang. Diharapkan daripada perbincangan dalam kertas konsep ini dapat memberi sumbangan dan menjadi panduan kepada pemimpin pertubuhan belia pada masa akan datang.

Kata kunci: kelestarian organisasi, badan bukan kerajaan, Pertubuhan Belia, Teori Sistem, pemimpin

1.0 Pengenalan

Sejak berlakunya pandemik COVID-19 di seluruh dunia, ianya bukan sahaja memberi kesan terhadap ekonomi negara sahaja malah memberi kesan kepada komuniti, keselamatan negara, krisis kesihatan yang telah mengubah budaya kerja dalam organisasi (Su et. al, 2022). Organisasi berdepan dengan cabaran dalam membuat keputusan, menghentikan pengoperasian dalam organisasi secara mendadak, memastikan misi dan visi organisasi tercapai dan mendapat kerjasama dari semua pihak (Bartik et al., 2020). Disebabkan itu, organisasi turut berdepan dengan cabaran untuk memastikan organisasi terus lestari dalam tempoh masa yang panjang. Terdapat organisasi gagal untuk lestari dalam tempoh yang panjang kerana kelemahan dalam pembangunan kelestarian (Bartik et al., 2020; Ceptureanu et al., 2017; Gassler, 1998; Grunert & Hildebrandt, 2004; Kantabutra, 2022; Lee & Nowell, 2015; Su et. al, 2022; Weerawardena & McDonald, 2010).

Antara organisasi bukan kerajaan yang berdepan dengan permasalahan dalam pembangunan kelestarian di Malaysia adalah pertubuhan belia. Pertubuhan belia merupakan

organisasi bukan kerajaan yang mempunyai misi dan visi yang jelas (Hamzah, 2005). Misi dan visi yang jelas ini merupakan elemen terpenting untuk mencapai kelestarian organisasi. Pemimpin memainkan peranan utama untuk memastikan misi dan visi ini tercapai. Oleh itu, kertas konsep ini akan membincangkan mengenai peranan pemimpin untuk memastikan kelestarian organisasi pertubuhan belia.

2.0 Sorotan Kajian

Dalam sorotan kajian lepas banyak para akademik dan pengamal dalam bidang sains sosial membincangkan mengenai kelestarian organisasi. Terdapat dua definisi untuk kelestarian yang sering digunakan secara meluas. Pertama, kelestarian merupakan pembangunan bagi memenuhi permintaan semasa yang tidak mempengaruhi keupayaan generasi pada masa akan datang bagi memenuhi keperluan masing-masing (WCED, 1987). Kedua, kelestarian merupakan pendekatan *triple bottom line* yang menumpukan kepada pertumbuhan alam sekitar, ekonomi dan sosial dalam sesebuah organisasi (Bartik et al., 2020; Luthra et al., 2015; Su et al., 2022). Oleh itu, tiga aspek utama iaitu alam sekitar, ekonomi dan sosial ini dihubungkan bagi memastikan keseimbangan yang baik agar sesebuah organisasi dapat lestari dalam tempoh masa yang panjang. Apabila kelestarian organisasi dijadikan matlamat ianya akan memberi motivasi kepada organisasi untuk mencapai prestasi yang baik dalam ekonomi, sosial, politik dan teknologi (Luthra et al., 2015).

Bagi memastikan matlamat kelestarian organisasi ini tercapai, strategi yang baik diperlukan oleh pemimpin pertubuhan belia bagi melatih dan membangunkan sumber manusia menjadi lebih berkemahiran pada masa akan datang. Strategi perlu dilaksanakan dengan baik kerana ianya berkait rapat dengan keperluan semasa mengikut persekitaran semasa. Keseimbangan dalam keperluan semasa ini menglibatkan perubahan ekonomi, politik, sosial dan teknologi (Ikram & Zhang, 2020). Keperluan semasa juga turut memenuhi keberkesanan dan kejayaan dalam pembangunan sumber manusia dalam sesebuah organisasi (Garavan, 1991; Garavan et al., 1995).

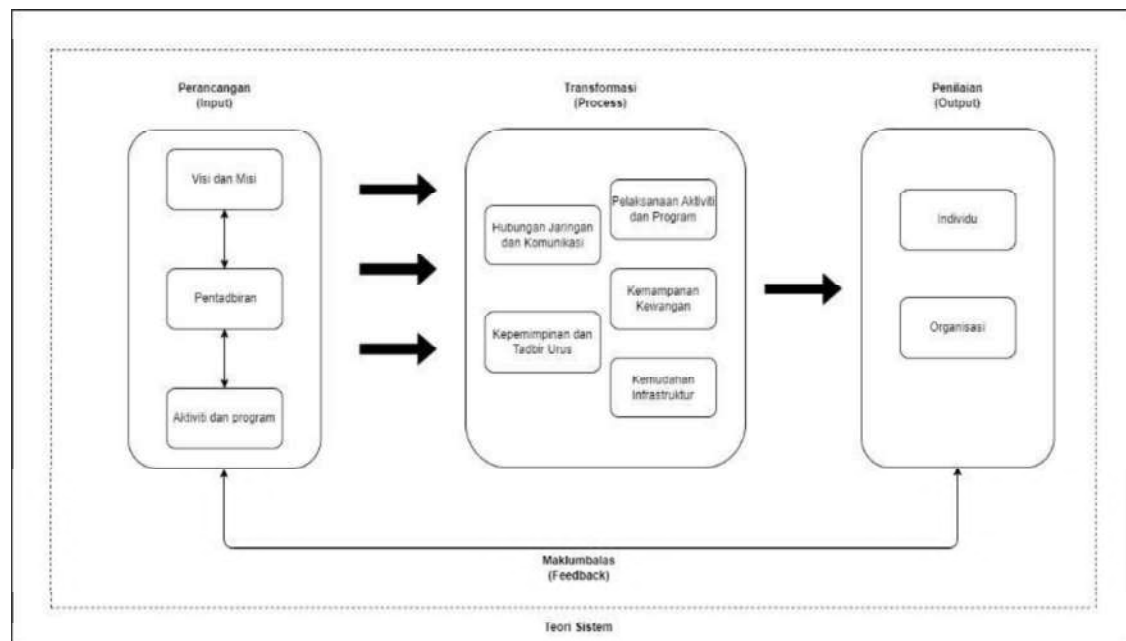
Bagi kelestarian organisasi dalam pertubuhan belia bergantung kepada tingkah laku pemimpin dan pasukan yang dinyatakan sebagai agen penggerak (Hamzah, 2005). Perancangan yang baik diperlukan daripada pemimpin bagi memastikan tahap efektif sesebuah organisasi (Benn et al., 2015). Pemimpin juga perlu tulus, jujur, bersedia mengakui kelemahan, berintegriti dan bijak dalam menguruskan sesebuah organisasi (Fernandez & Shaw, 2020). Antara aspek utama dalam pemimpin adalah mesra, kredibiliti, jujur, amanah, tidak mengamalkan rasuah dan mempunyai kepimpinan yang baik. Pemimpin perlu mempunyai aspek-aspek yang berikut antaranya memiliki personaliti yang unik, membentuk tingkah laku yang baik kepada pasukan, dapat memberi motivasi kepada pasukan, memudahkan proses dalam kumpulan, dapat mempengaruhi orang lain, menjaga hubungan di antara pemimpin dan pasukan, pembangunan struktur dalam organisasi dan memastikan matlamat organisasi tercapai (Chen & Sriphon, 2021).

3.0 Kerangka Teori

Teori Sistem ini bertujuan untuk memahami dan menganalisis terhadap proses dalam organisasi (Kantabutra, 2002). Teori Sistem juga merupakan sebuah teori yang berhubung di antara satu sama lain yang mempunyai tujuan dalam sesebuah organisasi. Terdapat dua jenis sistem dalam Teori Sistem iaitu terbuka dan tertutup. Sistem ini mempunyai sempadan yang memisahkan organisasi dengan persekitaran. Bagi sistem terbuka walaupun berdepan dengan isu dan cabaran untuk menghadapi proses kelestarian ianya akan membentuk kepada keseimbangan yang baru manakala sistem tertutup akan kembali kepada keadaan yang sama kerana sistem tertutup sempadan akan menjadi lebih ketat berbanding dengan sistem terbuka yang lebih longgar (Kantabutra, 2022). Sistem ini adalah struktur, proses dan bahagian dalam sesebuah organisasi.

Interaksi di antara sistem-sistem yang terdapat dalam organisasi ini akan membuatkan ianya menjadi lebih dinamik dan bersifat responsif terhadap perubahan (Kantabutra, 2022). Terdapat komunikasi, pertukaran dan interaksi yang berlaku di dalam organisasi dan persekitarannya.

Jadual 1 di bawah menunjukkan aspek-aspek penting yang memerlukan tugas pemimpin. Peranan pemimpin dalam pertumbuhan belia bermula pada peringkat perancangan iaitu dari menetapkan visi dan misi yang jelas, pengurusan pentadbiran serta perancangan aktiviti dan program. Pada peringkat ini, pemimpin perlu berkomunikasi dengan baik bagi bersama mempengaruhi pasukan agar tercapai segala perancangan yang telah diatitkan pada peringkat awal penubuhan (Hamzah, 2005). Pada peringkat ini, pemimpin perlu membuat perancangan yang baik berdasarkan perubahan persekitaran yang berubah secara drastik mengikut persekitaran semasa. Setiap maklumat dalam organisasi akan dialirkan melalui *input* serta berlakunya proses transformasi supaya proses tersebut akan dinilai dan diperbaiki pada masa akan datang (Plaza-Úbeda et al., 2019). Proses transformasi melibatkan perancangan dan pengurusan daripada pemimpin. Selain itu juga, dalam proses transformasi dalam pertumbuhan belia akan berlaku hubungan jaringan dan komunikasi, pelaksanaan aktiviti dan program, kemampuan kewangan, kepemimpinan dan tadbir urus serta kemudahan infrastruktur. Setelah menjalani perancangan dalam peringkat *Input* dalam Teori Sistem ini akan menjalani proses transformasi dan lingkungan tersebut akan keluar daripada sistem yang merupakan *output*. Pada peringkat akhir ini akan dinilai kesan terhadap individu dan organisasi (Kantabutra, 2022; Plaza-Úbeda et al., 2019).



Rajah 1. Kerangka Teori Sistem dalam pertumbuhan belia

4.0 Implikasi

Implikasi kertas konsep ini membawa kesan yang positif dalam pengurusan organisasi dan budaya organisasi dalam pertumbuhan belia dimana pemimpin yang memahami kelestarian organisasi akan berusaha untuk meningkatkan keupayaan dan pengurusan organisasi dengan membuat perancangan yang baik dalam jangka masa yang panjang serta keputusan yang efektif. Pemimpin boleh menggunakan Teori Sistem sebagai panduan untuk menilai operasi dalam organisasi dengan melihat bahawa setiap proses dalam Teori Sistem ini akan akan

mempengaruhi keseluruhan organisasi. Oleh sebab itu, setiap aspek di dalam proses ini memainkan peranan penting terhadap kelestarian organisasi. Melalui perancangan pemimpin akan mendapat maklumat serta mengadaptasi maklumat tersebut untuk membuat keputusan yang baik terhadap organisasi. Sehubungan itu, kertas konsep ini akan menjadi asas kepada pembuat keputusan yang terlibat pada peringkat individu, organisasi badan bukan kerajaan, pemegang taruh.

5.0 Kesimpulan

Kertas konsep ini jelas menunjukkan bahawa pemimpin memainkan peranan penting untuk memastikan kelestarian organisasi. Walaupun berdepan dengan isu dan cabaran pemimpin perlu bijak dalam mengatur strategi, memimpin dengan teladan yang baik dan mengurus pasukan dengan berkesan bagi memastikan jangka masa yang panjang. Pemimpin merupakan pengurus perubahan yang akan memberi nasihat dan sokongan kepada pasukan serta sentiasa memastikan misi dan visi berjaya. Setiap organisasi tidak boleh diubah tetapi organisasi boleh menyesuaikan diri mengikut perubahan yang akan mempengaruhi strategi, teknologi, struktur dan sistem sumber manusia dan budaya.

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Moderating Effect of Stress Between Cultural Intelligence, Organizational Support, Family Support and Job Performance among the Expatriates in Malaysia

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Abstract

This study aims to examine the factors influencing the work performance of Chinese expatriates in the construction industry in China, considering individual factors, organizational factors, family factors, and the stress generated by the host country's environment. Currently, research on expatriates is predominantly focused on Western expatriates. Given the differences in organizational culture, cross-cultural factors, and family structures, the challenges faced by Chinese expatriates and their work performance may significantly differ from those of Western expatriates. Recognizing the importance of these distinctions in both academic research and practical business contexts, this study specifically investigates the impact of individual Cultural Intelligence (CQ), Perceived Organizational Support (POS), and family support on work performance. Furthermore, it explores how stress moderates the relationship between these factors and organizational performance.

Key words: *cultural intelligence, perceived organizational support, family support, expatriate job performance, stress.*

1.0 Background of study

The global construction industry is undergoing rapid transformation, and the construction sector in China is no exception. Driven by China's "Belt and Road" initiative, numerous Chinese construction firms are stepping onto the international stage to bid for international projects. In the post-pandemic era, how to further propel the development of Chinese construction company has become a topic worth pondering.

By the end of 2022, the revenue from China's overseas contracted engineering sector reached a staggering \$154.99 billion, a figure that vividly showcases its swift expansion in the context of globalization. The total value of new contracts even amounted to \$253.07 billion. Correspondingly, the number of Chinese staff dispatched abroad is steadily on the rise, anticipated to hit 543,000 by 2023 (China Construction Industry Association, 2023).

Within this expansive international network, Malaysia stands out due to its long-standing diplomatic ties with China. Currently, over 100 Chinese construction companies are operating in Malaysia, with an approximate number of 13,033 Chinese expatriates working there. The job performance of expatriates has always been the focal point in academia. As stated by Sims and Schraeder (2004), the failure rate of expatriate assignments varies depending on the host country, ranging between 16% to 70% (Black & Gregersen, 1999). Notably, for multinational corporations, there doesn't appear to be a decreasing trend in the failure rate of expatriate assignments over the years. (Pires et al., 2006) The performance of many Chinese employees working overseas leaves room for improvement, with a significant 22.15% choosing to resign during their assignment (Zhong Huahao, 2023).

Earlier studies have pinpointed that perceived organizational support (POS) (Singh et al., 2022) and family support (Wang Yumei, 2014) play a pivotal role in enhancing job performance. Additionally, Cultural Intelligence (CQ) is deemed a vital predictor for expatriate job performance (Setti et al., 2022). Meantime, data from the Chartered Institute of Building in the UK (2020) reveals that 97% of construction practitioners are grappling with immense pressure (Rees-Evans, 2020).

Against this backdrop, this study aims to explore the associations between cultural intelligence (CQ), perceived organizational support (POS), family support, and expatriate job performance. It further delves into the moderating role of stress within these relationships. For this purpose, we selected expatriates working for Chinese construction enterprises in the Klang Valley, Malaysia, for an in-depth questionnaire survey.

2.0 Problem statement

China, as an emerging global economic powerhouse, has witnessed a significant proliferation of its expatriates on the world stage due to the continual expansion of its multinational corporations (Wood & El Mansour, 2010). Notably, the proportion of these expatriates has exceeded 50%, a figure markedly higher than their Western peers (Oki, 2013). Despite the surge in Chinese expatriates, research predominantly remains centered on their Western counterparts (Bonache et al., 2018). Given the profound differences in culture, family structures, and organizational cultures between China and the West, the challenges and job performances of Chinese expatriates might differ significantly from their Western counterparts. This research gap underscores the imperative of intensive studies on Chinese expatriates.

The construction industry, being a pillar of the global economy and one of the leading labor employers worldwide (Langdon & Sawang, 2018) places heightened importance on the management and performance of its expatriates. A recent survey by Deloitte, (2023) reveals that the engineering and construction sectors face the most substantial challenges in recruiting international job candidates. This implies that the job performance of expatriates in the construction sector is critically influenced by various factors.

Previous studies have identified factors like Cultural Intelligence (CQ), perceived organizational support (POS), and family support as significant determinants influencing the job performance of expatriates (Chen et al., 2023; Das et al., 2015; Fogaça et al., 2021; Guangdong Wu et al., 2018; Mohammad, 2013; Presbitero, 2016; Puyod & Charoensukmongkol, 2019; Rubaca & Majid Khan, 2021). However, given the cultural backdrop of China and societal nuances of Malaysia, these factors might have distinctly varied implications compared to their Western counterparts. Firstly, with English being the predominant global lingua franca, which enjoys a substantially higher usage coverage than Chinese, Chinese expatriates dispatched to English-dominant countries may grapple with language barriers. In such scenarios, CQ's role in influencing job performance gains paramount importance when juxtaposed against Western expatriates.

Secondly, the form and extent of organizational support accorded to Chinese expatriates differ from their Western peers, given factors like differential salary structures and benefits (Beiting, 2019). Lastly, while accompanying family members is a prevalent phenomenon among Western expatriates, with 65% of American expatriates having their families with them during assignments (Qiu Licheng, Cheng Zeyu, 1995), traditional Chinese culture does not encourage the same. Consequently, the manner in which Chinese expatriates receive family support differs starkly from their Western counterparts (Powell, Francesco & Ling, 2010; Yang, Chen, Choi, et al., 2000). These differences might further influence their job performance. Moreover, expatriates invariably confront myriad stressors when working abroad,

emanating from unfamiliar cultural landscapes, high-intensity work environments, profound homesickness, and interactions with local stakeholders (Baruch et al., 2016). Previous empirical research has substantiated that such stresses can detrimentally impinge on job performance (Liu et al., 2017).

In summary, this research endeavors to bridge the extant gaps in literature by deeply probing into the determinants influencing job performance among expatriates in China's construction industry. Specifically, the study not only inspects the direct impact of factors like Cultural Intelligence, perceived organizational support, and family support on job performance but also delves into how stress potentially moderates the relationships between these determinants and job performance. Through this comprehensive investigation, the study aims to furnish Chinese multinational corporations with scientifically rigorous management strategies for their expatriates, enhancing their job performance, facilitating them to adeptly navigate globalization challenges, and furthering the company's internationalization endeavors, thereby contributing a more holistic and enriched research perspective to the academic community.

3.0 Key words

3.1 Cultural Intelligence

Cultural intelligence can be understood as the capability to relate and work effectively across cultures. (*Definition of Cultural Intelligence from Cambridge Dictionary, 2023*).

3.2 Perceived organizational support.

Perceived organizational support refer to come to an opinion about help or encourage somebody/ something by an organization (*Definition of Perceived Organizational Support from Oxford Dictionary, 2023*).

3.3 Family support

Family support refer to refer to help or encourage somebody/ something by a group consisting of one or two parents, their children and close relations, including whose who are now dead (*Definition of Family Support from Oxford Dictionary, 2023*).

3.4 Job performance

Job performance refers to a meeting in which an employee discusses his or her progress, aims, and needs at work with his or her manager or employer (*Definition of Job Performance from Cambridge Dictionary, 2023*).

3.5 Stress

Stress in dictionary means great worry caused by a difficult situation, or something that causes this condition: Psychological (*Definition of Stress from Cambridge Dictionary, 2023*).

3.6 Expatriate

Expatriates refer to someone who does not live in their own country (*Definition of Expatriate from Cambridge Dictionary, 2023*).

4.0 Research design

The correlation method utilized in this research forms an integral part of quantitative methodologies. Essentially, correlational research encompasses the survey process itself, leveraged for its profound utility in data acquisition and the clarification of study concepts. Target respondents will receive questionnaires designed to amass the necessary data, employing a strategy inherent to surveys to evaluate various variables.

Upon the completion of data collection, descriptive studies will examine demographic aspects, including gender, age, marital status, and additional variables such as Cultural Intelligence (CQ), Perceived Organizational Support (POS), family support, stress, and job performance. This study incorporates a statistical analysis to decipher the relationships among these multifaceted variables, centering the investigation on identifying significant associations between them.

5.0 Sampling size

Sampling is the process of selecting individual units from a population. To ensure the reliability and validity of the research results, the sample selection process must be carefully designed and executed. In order to balance the accuracy of the research results with the feasibility of selecting samples, as well as the researcher's time and resources, an appropriate number of samples must be chosen for the study. The number of samples selected has a direct impact on the accuracy of the research outcomes. Therefore, choosing the appropriate number of samples can make the research more meaningful, the ever-increasing need for a representative statistical sample in empirical research has created the demand for an effective method of determining sample size. To address the existing gap, Krejcie & Morgan (1970) came up with a table for determining sample size for a given population for easy reference.

According to the sample size table from Krejcie & Morgan, (1970), when the population is 10,000, the required sample size is 370, and when the population increases to 15,000, the required sample size becomes 375. Therefore, for a population of 13,033, the needed sample size should exceed 370 but not be more than 375. However, in most social surveys, especially those conducted via postal mail or email, responses are seldom 100% (Taherdoost, 2016). An effective method to meet the minimum sample requirement is to increase the initial distribution of the survey by 50% (Kotrlík & Higgins, 2001). Based on these considerations, this study has decided on a chosen sample of 374 and anticipates distributing 561 questionnaires to obtain sufficient data for analysis.

6.0 Sampling techniques

In conducting any form of research, selecting a representative sample set is crucial as it dictates the reliability and validity of the research findings and their generalizability. When studying the relationships between variables, both probabilistic sampling techniques and non-probabilistic sampling techniques can be utilized. This research employs a purposive sampling method, a non-random technique based on selecting samples with specific purposes, ensuring that the study samples possess specific attributes required for the study.

The selection of samples in this study will be based on several specific criteria. For instance, participants must be employees dispatched by Chinese construction companies to Malaysia, have been working in Malaysia for more than six months. Initially, the researchers will reach out to various construction companies' human resources departments through the China Enterprises Chamber of Commerce in Malaysia. After explaining the research purpose and requesting collaboration, upon approval, an online link to a Google questionnaire will be provided and distributed by the respective companies' human resource heads to eligible employees. The data will then be extracted from the received valid responses for analysis.

To control the biases that may occur with purposive sampling and ensure the authenticity of the data, the researchers will translate the questionnaire into both Chinese and English to ensure clarity. Necessary instructions will be provided, and respondents' anonymity will be assured. The size of the sample will be based on the standards of previous similar studies, combined with the current feasibility. It is anticipated that 561 questionnaires will be distributed to ensure a sufficient number for analysis, securing statistical credibility and validity of the

research outcomes.

7.0 Data analysis

After collecting data from respondents through the questionnaire, the first step is to verify whether the questionnaire is completed and whether the entries are accurate, followed by data cleaning and the addressing of missing values. Next, outliers are checked, and the data undergo necessary transformations before being transferred to data analysis software. The data analysis in this study will employ both descriptive statistical analysis and inferential statistical analysis. Descriptive statistical analysis will be conducted using SPSS software, while the inferential statistics portion will be analyzed using Smart PLS software.

7.1 Descriptive statistic

The descriptive statistical analysis in this study will summarize and present information from the demographic section. The demographic information includes age, gender, level of education, marital status, and the duration of work in Malaysia, among others. This section will display data through frequencies and percentages or via tables, pie charts, and bar graphs to ensure clarity and ease of understanding.

Additionally, descriptive statistics will illustrate the characteristics of each variable through indicators such as mean, standard deviation, median, mode, and whether the distribution is normal or not. Determining whether the variables conform to the characteristics of a normal distribution is essential for selecting the appropriate data analysis method. As per the research conducted by D. George & Mallery, (2010), for a distribution to be considered normally univariate, the values of skewness and kurtosis should fall within the range of -2 to +2. This criterion helps in affirming the normalcy of the distribution, influencing the choice of statistical techniques suitable for further analysis.

7.2 Inferential Analysis

Inferential statistical analysis refers to the extrapolation of research findings obtained from a study sample to the entire research population through statistical inference. Inferential statistical analysis is divided into bivariate analysis and multivariate analysis. The inferential statistical analyses involved in this study include Exploratory Factor Analysis (EFA) and Structural Equation Modeling (SEM).

7.2.1 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a statistical method widely used in social science research. It is utilized for discovering the possible limited number of underlying factors behind a large number of variables. Before conducting an exploratory factor analysis, it is first necessary to ensure data cleanliness. Then, the KMO (Kaiser-Meyer-Olkin) measure and Bartlett's Test of Sphericity are performed to determine if the data is suitable for factor analysis.

Once it is established that the factors are suitable for analysis, factor extraction is carried out to identify the number of underlying factors in the data. This is accomplished by selecting highly correlated factors that contribute most to the variables, combining them to form several factors. The extracted factors are organized based on their contribution to the total variance of the variables.

Finally, factor rotation is conducted. Factor rotation is designed to make the factor structure more interpretable, and this study employs the Varimax method. Through factor rotation, interrelated items are loaded onto a specific factor, enabling them to have higher

loadings. Based on these loadings, the concepts and structures that each factor represents can be interpreted. The factors are then named based on the variables with the highest loadings on them.

7.2.2 Structural Equation Modeling

Structural Equation Modeling (SEM) is a multivariate statistical analysis technique designed to assess causal relationships between variables. It relies on theoretical foundations, previous studies, and models crafted by researchers to examine causal, correlational, or bidirectional relationships among variables. In this study, SEM is employed to respond to all research queries articulated in the literature and to authenticate theories referenced therein. Additionally, SEM aids in revealing the direct and indirect effects within the theoretical framework. For instance, it is used to analyze the correlations between independent variables—Cultural Intelligence (CQ), Perceived Organizational Support (POS), and family support—and the dependent variable, which is the job performance of expatriates, along with the moderating effect of stress on these relationships.

It is important to note that SEM necessitates a specific sample size. Typically, the sample size for such studies ranges from 200 to 500 individuals. This study aims to secure a sample size of 375, fitting within the 200-500 range. Moreover, the multivariate normality of the variables, ensuring they conform to a normal distribution, should also be considered.

SEM involves two primary stages: confirmatory factor analysis (CFA) and structural model analysis. The process begins with CFA to ascertain whether the latent variables are well-defined, followed by structural model analysis to explore inter-variable relationships. SEM facilitates the modeling of relationships between variables, enabling concurrent estimation of all hypothesized paths and the assessment of moderating relationships. However, researchers must evaluate the overall fit of the model (for example, through CFI values) to determine the model's consistency with observational data. Furthermore, it is essential to ascertain whether the paths in the evaluated model are significant and support the hypotheses presented in the literature.

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Navigating Workplace Incivility: A Qualitative Study of Academics at Private Universities in Malaysia

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Abstract

Higher education institutions worldwide are concerned about academic incivility, which includes abuse and disrespectful behavior. Workplace incivility in higher education can affect academics' well-being and productivity. Academics' coping mechanisms and experiences with workplace incivility at private universities are explored in this study. Academics face incivility from supervisors, coworkers, students, and administrators. Discriminatory behavior, exclusion, and disrespectful communication define academic incivility. Workplace incivility harms academics' physical and mental health, job performance, job satisfaction, well-being, intention to quit, and professional identity. As private universities increase their global influence, it is essential to understand the intricacies of civility issues inside their academic institutions. In-depth interview with a thematic analysis was done on ten academics from selected private universities in Malaysia. Data from the interviews were analyzed with given codes, categories, and themes. The findings showed that academic workplace incivility negatively impacts academics' emotional well-being, job performance, and interpersonal relationships. For the coping strategy, academics often employ several strategies when faced with incivility. These strategies include directly confronting the instigators, actively avoiding them, seeking support from their social networks, and experiencing emotional reactions such as dissatisfaction and frustration. This study finds that proactive strategies and institutional support are needed to eliminate academic incivility and foster collaboration. Understanding academics' incivility can help create a productive and healthy academic community and teach new students respect, conflict resolution, inclusivity, ethical behavior, critical thinking, responsibility, and a positive learning environment.

Keywords: *workplace incivility, academic incivility, mistreatment, private universities, coping*

1.0 Introduction

In recent decades, scholars in the field of organizational research have conducted thorough research into many aspects pertaining to negative behaviors exhibited within the workplace. The phenomenon of workplace negativity has emerged as a significant topic within the field of organizational behavior literature (Aleksic, 2021; Musairah & Farhana, 2021; Schilpzand et al., 2016). Workplace incivility is one of the most recent instances of negativity in the workplace that has recently garnered attention. Incivility at work occurs through any types of affiliation in the organisation and may happen between an employee and employer, employee and colleagues, employee, and customers or with any other stakeholders associated to the organisation. The individual who experiences workplace incivility is often aware of the intentional mistreatment they are undergoing; nonetheless, it might be difficult for them to fully understand or understand

that they are being specifically targeted (Musairah & Farhana, 2021). Academic and business sectors have become increasingly concerned with the prevalence and repercussions of incivility in the workplace in Europe and the United States, research investigating the frequency and importance of this conduct in Asia is conspicuously scarce (Arshad & Ismail, 2016).

There have been numerous reports in newspapers and other media about workplace incivility in Malaysian organizations and several research on workplace incivility have been conducted in various service sectors such as hotel industries and hospitals, but its impact on academics in Malaysia remains understudied (Wafa & Hassan, 2016). Limited research has been conducted on instances of incivility encountered beyond the confines of the workplace, such as within academic institutions (Caza & Cortina, 2007). The existing literature mostly focuses on graduate and undergraduate nursing students, as well as nursing educators, inside educational institutions (Clark & Cynthia, 2008; Lee et al., 2014; Masum et al., 2016; Nicholson et al., 2014). These data demonstrate that rudeness happens not just in public spaces or organizations but also in university classrooms, where it can hinder teaching and learning, have negative effects on students' or faculty members' wellbeing, and deteriorate professional relationships (Hopkins et al., 2017; Lampley et al., 2016). This qualitative study aims to explore the experiences and coping strategies concerning academics in Malaysian private universities.

2.0 Literature Review

Four types of incivility caused by students are simple annoyances, intimidation, classroom terrorism and threat of violence (Feldmann, 2001). Besides this, disorderly conduct, disruptive use of cell phones, substance abuse, holding a disruptive conversation, reading newspaper during class, plagiarism, arriving late and leaving class early, being unprepared for class, making sarcastic remarks, threat of physical harm and verbal and physical assault (Alberts et al., 2010; Clark & Cynthia, 2008; Leiter et al., 2015; Segrist et al., 2018) are more examples of incivility caused by students. Whereas incivility from the university administrators, faculty and colleagues can be in the form of failing to uphold one's share of the workload, using cell phones or other handheld devices during meetings, putting down fellow faculty members, gossiping about colleagues, interrupting others, and challenging other colleagues' knowledge (Clark & Cynthia, M., 2013).

In the past few years, academic incivility, which includes abusive and disrespectful behavior, received a lot of attention (Clark & Cynthia, 2016). Existing research in this field underscores the adverse effects that incivility has on the well-being and job performance of academics (Cortina & Magley, 2009). Academics who experience incivility often face discrimination, exclusion, and rude communication, which can lead to high levels of stress and job dissatisfaction (Smith & Kelloway, 2016). Lazarus's Model of Stress and Coping suggests that when faced with academic incivility, academics use a variety of coping mechanisms (Lazarus & Folkman, 1984). These strategies encompass direct confrontation of instigators, active avoidance, seeking support from social networks, and emotional regulation (Johnson-bailey, 2016). Also, research shows that proactive measures and help from institutions are very important for reducing the negative effects of academics.

3.0 Methodology

This study employs a qualitative research design. Qualitative data is obtained by conducting interviews or observations with a limited sample size of individuals or sites. The data collection process involves the use of open-ended questions that allow participants to freely express their thoughts and produce their own responses. Creswell (2013) says that qualitative research is used to investigate, understand, or make sense of social events as they happen in their natural settings. It allows an in-depth investigation of the complexities of human behaviour, experiences, and social circumstances that quantitative approaches alone may not adequately indicate. When

studying subjective perspectives, cultural nuances, and the underlying meanings and motivations of individuals or groups, qualitative research is effective. In an attempt to seek and answer the research questions, the research design of this study focuses on a case study.

The primary objective of this study is to examine the phenomenon of workplace incivility as it pertains to the experiences and coping mechanisms employed by academics. The selection of participants was based on the research questions. Qualitative research sometimes focuses on a limited number of samples, intentionally chosen to gather comprehensive data relevant to the topic being investigated (Merriam & Tisdell, 2016). In this study, participants were carefully selected using a purposeful sampling strategy to ensure they would have the information needed to address the study's research questions (Patton et al., 2012). Ten academics were recruited from selected private universities in Malaysia based on their voluntary participation, which was contingent upon meeting predetermined criteria. A triangulation method was used to facilitate this study.

Data was collected through in-depth interviews using a set of semi-structured interview protocols. In addition, document analysis was also conducted to seek answers to the research questions addresses. The participants were provided with a briefing to establish a clear understanding of the study's objectives and to get consent for conducting in-depth interviews. To be eligible, participants must be Malaysian citizens employed at a private university in Malaysia, have a minimum of two years of work experience, and have experienced workplace incivility. Codes and themes were developed using Nvivo software during this process.

4.0 Findings

The research conducted on academic incivility among faculty members at private universities in Malaysia unveiled that emotional health and job performance are adversely affected by incivility that emerges from a variety of sources within the academic setting. The variety of coping mechanisms employed, which included both direct confrontation and social network support, underscored the importance of institutional backing and proactive approaches in combating incivility. The results of this study emphasize the significance of cultivating an environment in academic establishments that values collaboration and respect, placing academic staff's mental and emotional well-being as a top priority, imparting knowledge to students regarding ethical conduct, conflict resolution, and respect as means to foster a positive learning environment, and establishing rigorous policies and greater awareness regarding workplace incivility within these types of institutions.

5.0 Conclusion and Recommendation

The issue of academic incivility is a significant concern within the academic community of Private Universities in Malaysia, necessitating prompt attention and response. The study proposes a comprehensive strategy to address this issue, encompassing institutional policies, awareness programs, and the establishment of a mental health support system for academics who are affected by it. This study suggest that Private Universities in Malaysia should:

- Consider the development and implementation of a comprehensive policy regarding academic incivility.
- Regular training sessions on professional ethics should be conducted for all individuals, including students.
- Establish reporting mechanisms and support services for victims of incivility.

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Using WhatsApp as a Digital Tool to Teach Reading Skills to Higher Secondary School EFL Learners

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Abstract

In this modern time, WhatsApp, one of the most widely used messaging apps, may be used on a variety of devices, including smartphones, computers, and tablets. This app is widely used as a means of communication. This program is ubiquitous, but it has been particularly universal in the academic world. However, English instructors have not made the most of this software, despite its promise as a medium that may aid them in teaching the English language reading skill. WhatsApp's functions include texting, calling, and sending media such as video, audio, links, location, document, and image between users, which can be used to teach reading skills. This research paper aims to discuss the possibility of utilizing WhatsApp as a digital media tool for teaching English language reading skills. For conducting this research, secondary data resources were used. It is assuming that English instructors and students may benefit from using WhatsApp to enhance the teaching and learning of English language reading skills, which will lead to increased English language reading proficiency among EFL learners in higher secondary schools in the contemporary era.

Keywords: *whatsapp, reading skill, language teaching, Scaffolding Theory*

1.0 Introduction

Today is the digital era. In this era, technological development has an effect on every aspect of human life. Social media is growing rapidly as a result of technological advancements in the modern digital era (Alshammari et al., 2017). WhatsApp (WA) is one of the most popular social media platforms used by modern people. Almost all humans use WhatsApp as a daily social media platform (Abu-Al-Aish and Love, 2013; Alshammari et al., 2017). It enables easy interaction among people through messaging, pictures, audio, and documents, and the unique feature of WhatsApp is group discussion (Bouhnik and Deshen, 2014; Costa and Han, 2017). There was an initial study done by Ramakrisnan in 2017 that focused on the usage of WhatsApp by B.Ed. trainees to improve their English language competence. The research involved 200 B.Ed. students from the district of Madurai. Kheryadi conducted the second study in 2017. By providing certain questions to the subject of his study via WhatsApp, he was able to perform his research. Justina carried out the final piece of the investigation in 2016. At Osmania University in India, she utilized WhatsApp to improve her reading and writing abilities as a first-year college student (Jasrial, 2019). There are several advantages associated with the utilization of WhatsApp as a learning tool for English as a Foreign Language (EFL) learners. The platform's accessibility and flexibility enable learners to conveniently utilize it at any time and from any location.

Technical, electronic, and digital thinking characterize the next generation of pupils. They have no trouble adapting to the latest technological advances. They are, in reality, fully aware of and participating in the globalization process (Dashtestani, 2016; Güler, 2017). WhatsApp is the

primary application they use to communicate. With the rise of social media, smartphones, and other mobile devices, students are less motivated to study traditional textbooks and curricula.

Over time, however, smartphone applications like WhatsApp are becoming increasingly important in people's daily lives, including their schooling (Hamad, 2017; Hazaea and Alzubi, 2016). WhatsApp has made our lives easier and provided us with a new method of obtaining education. As a result, "these deep shifts are imposing a growing strain on the old paradigms of teaching and learning." As a result, our kids are entitled to higher standards of instruction. Filling the gap might be accomplished using e-learning, m-learning, and WhatsApp, among other methods. Communication technologies are enabling a move towards e-learning. Thus, WhatsApp has a significant impact on learners' reading comprehension (Huang and Lin, 2011).

WhatsApp's numerous features and functionalities make it a useful digital tool for teaching English reading. Teachers can exchange reading resources with their pupils, such as articles, short tales, or poetry, using WhatsApp's digital features. This may be accomplished by providing links to internet resources or by transferring files directly through the app (Indiran et al., 2022; Tümen Akyıldız & Çelik, 2021).

It is possible to improve reading comprehension through technological applications. Literacy education may benefit greatly from technological advancements in digital technology. In addition to providing several benefits, this technology-based solution helps pupils improve their reading proficiency (Jasrial, 2019). In today's world, WhatsApp is a widely-used technological program that has a large user base. As a social media network, WhatsApp may be used to quickly obtain information. Students can communicate in English at any time and from any location during the teaching and learning process (Syairofi et al., 2023; Khodabandeh, 2023; Ningsih et al., 2023). In addition, WhatsApp can assist learners with improving their language abilities, such as their ability to communicate and read (Khalaf, 2017; Khan, 2016).

There are several benefits to employing technology-based tools to help pupils improve their reading comprehension. According to research by Khalaf and Khan (2016), electronic tools like WhatsApp can help students improve their reading abilities since they allow them to engage authentically with people all over the globe in English, which is recognized as a global language. There are several benefits to using social networking technologies, including rapid feedback, real-life connection, a good learning attitude, and increased confidence among students (Khan, 2016). Khalaf (2017) says WhatsApp is a learner-centred tool for face-to-face connection that boosts students' willingness to study within and outside the classroom. A more recent study by Jasrial (2019) suggests that children should be taught reading abilities like skimming and scanning through the use of the Internet and other technology-based tools.

Reading comprehension is a cornerstone of most standardized tests that measure students' ability to read in English. It has been noted, however, that the curriculum required at the higher secondary school level does not provide for sufficient classroom practice of this ability. High school students have a hard time getting the hang of these things. This increases their nervousness and lowers their drive. As a result, innovative approaches to education are required to better equip students from EFL backgrounds to read and practice in English. Because of the widespread usage and appeal of social networking services like WhatsApp, they can be used to encourage students to strengthen their reading abilities (Syairofi et al., 2023; Khodabandeh, 2023; Ningsih et al., 2023). Subsequently, based on the aforementioned research and document analysis, this paper has the following objectives:

- a) To identify WhatsApp aids in the EFL classroom and procedures for using WhatsApp to teach reading skills in English.
- b) To identify the facility of WhatsApp for reading activities for EFL students outside of the classroom.

2.0 Literature Review

Users may communicate in a number of ways thanks to WhatsApp's expanded features. Text messages can be sent one-on-one or in groups, which improves reading comprehension. There's also the option of making phone or video chats and sharing papers in various multimedia formats (Plana et al., 2013, Jasrial, 2019). With this feature, WhatsApp may be an effective tool for improving reading abilities since it makes it simple to post, share, and participate in online discussions at any time. WhatsApp is a well-liked and effective method of communicating via mobile texting when learning a foreign language (Bouhnik and Deshen, 2014; Costa and Han, 2017).

As is the case with SMS in general, WhatsApp aids in the development of language abilities, including vocabulary, pronunciation, reading, and writing (Wang and Smith, 2013; Wang, 2017). The new potential of WhatsApp as a collaborative learning medium, compared to SMS, also helps students and teachers increase meaning negotiation, the transfer, sharing, and creation of linguistic information, as well as active communication (Miangah and Nezarat, 2012; Plana et al., 2013). Research into the use and popularity of WhatsApp in the Saudi Arabian setting has been conducted via a variety of quasi-experimental studies (Khalaf, 2017; Khan, 2016; Naderi and Akrami, 2018). Studies have indicated that using WhatsApp to study English has a positive impact on all facets of the language's use, including reading, speaking, and understanding of vocabulary and word choice, among other things (Tümen Akyıldız & Çelik, 2021; Alshammari et al., 2017). It is safe to say that research studies have shown the effectiveness of SMS and WhatsApp in English language acquisition. The use of SMS and WhatsApp for instruction by students outperformed face-to-face and paper-based methods. Reading, pronunciation, and vocabulary have all improved as a result of the training (Dashtestani, 2016; Güler, 2017).

3.0 Methodology

This research is based on secondary data. In this research, no statistical data or analysis is used. Method of Findings Literature: The study relies on secondary sources of information. The current resources for teaching reading skills with WhatsApp were reviewed in this research study. Articles, books, and chapters from books are selected for this work. Inclusion criteria and exclusion criteria: The material reviewed for this study mostly dealt with WhatsApp as a tool for reading instruction. Only studies published in English were considered for this review. The item is given priority based on its peer evaluation and reputation for inclusion. Articles that do not meet the journal's English publication requirements or that are unpublished theses are excluded. Identifying Literature: In order to get to the documents, the search method used a number of databases. The following scholarly domains were utilized: Google Scholar, JSTOR, ERIC, Sage, and Google.

Screening: The study's materials were chosen from the search record while maintaining the topic's relevancy after the search for relevant materials had been conducted. Quality and Eligibility Evaluation: Skimming the full-text articles was done after getting the pertinent ones for further examination. The primary intention was to verify the material's validity and quality. Books and scholarly journal articles were incorporated into this. Nonetheless, only publishers with a good reputation and well-reviewed materials were considered for inclusion. Conference papers are also utilized, in addition to books and journal articles. The papers for the study were iterated several times before they were finally included. To find out what methods were used for the literature reviews, researchers looked both forwards and backwards while searching. In order to exclude papers that were irrelevant to this study, the authors kept focused on the topic. After that, the main ideas, findings, and conclusions from the necessary materials were compiled for this study (Awang, 2012).

4.0 The features of WhatsApp and the characteristics of reading skills

The extent to which a reader is able to extract relevant information from a book is referred to as comprehension. Encoders participate in both the transmission and reception of data during reading. In this communication model, the writer is the encoder and the reader is the decoder. The message must be reconstructed in order to be read. It makes the reader do some serious thinking and preparation. The reader must be able to separate the text from the supporting concepts while still picking up on the underlying meanings. While reading, the reader is essentially making "decisions" about what he wants to take away from the text (Khan, 2016).

The "Reading" consists of the following characteristics:

- "Input Data" is in the form of a print image.
- "Bits of Information" in the short term for the reader.
- "Bracketing with already stored knowledge in long-term memory
- During the process of reading to the reader

When reading, the reader receives visual information about words and symbols through their eyes (Rraku, 2013). In short-term memory, bits of information are stored for a brief period of time. The new information is connected to previously stored information in long-term memory. The reader is able to fill in any gaps in the information he receives through textual symbols if he has a prior understanding of the subject matter. Sub-reading abilities such as scanning and skimming assist the reader in grasping what they are reading, as reading involves comprehension by the reader (Rraku, 2013).

According to Speroff (2016), WhatsApp is a cross-platform mobile messaging program that leverages the internet to deliver messages. The following are some of WhatsApp's key features: Sending free texts to friends and family is easy thanks to the availability of this feature. Group chat allows users to communicate with groups. Videoconferences and voice call through WhatsApp WhatsApp's voice and video calls are completely free. Using WhatsApp on a Computer and a Web Browser: Conversations may be held on WhatsApp. Use the web client to access WhatsApp on desktops and laptops (Miangah and Nezarat, 2012; Plana et al., 2013). WhatsApp's image and video features allow users to share their most memorable moments with their friends and family by instantly exchanging photographs and videos with each other. Users may simply share the papers. They don't have to use email or file sharing program to share PDFs, papers, spreadsheets, and slideshows. Using group chat, users may communicate with groups (Khalaf, 2017; Khan, 2016; Naderi, and Akrami, 2018).

Teachers may use WhatsApp to teach reading in the classroom and as homework outside of the classroom. In the form of a file, teachers can share reading materials with their students' WhatsApp groups for discussion. Teachers may, for example, provide a doc file including a narrative text and a few questions. Then, students can save the file on their personal devices. The pupils then read the material and answered the questions that followed (Tümen Akyıldız & Çelik, 2021). They can use WhatsApp to communicate with their professors about their responses. They transmit a message. Everyone's response in the class WhatsApp group is posted so that everyone may interact (Tümen Akyıldız & Çelik, 2021; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019). In order to prevent their students from copying and pasting each other's work, it was created. The teacher can incorporate videos and audio into the text to make reading more enjoyable for students and to hold their attention while reading (Miangah and Nezarat, 2012; Plana et al., 2013).

5.0 The use of WhatsApp in higher secondary schools

For centuries, literacy was defined by the ability to read and write clearly. In the past, pupils learned to read and write through the use of print media (Wang, 2017). According to some, learners today engage in literacy activities, typically via digital methods. Higher secondary school

students, particularly those who are more adept at keeping up with new technology, are among the most avid users of internet-based applications in the twenty-first century (Tümen Akyıldız & Çelik, 2021). The advancement of technology makes them fortunate students who may get a lot from learning new literacy skills at the same time. What's bad news for some teachers is that, as mobile devices and the internet become more widely available, higher secondary school students are refusing to read on paper. This puts traditional classroom methods for teaching literacy at risk because students' attention is being drawn away from the classroom (Miangah and Nezarat, 2012; Plana et al., 2013). On the other hand, the new technological problems can also encourage educators to use innovative techniques to teach literacy while utilizing new technology. Teachers may use WhatsApp to provide students' digital media experiences and classroom literacy assistance (Wang and Smith, 2013; Wang, 2017).

The messaging software WhatsApp may be an effective teaching tool for teaching reading skills in English as a second language. The benefits to students include: a) free practice of English language reading skills and components; b) a more personal and comprehensive relationship with their teachers; c) improved socialization for the student with reading; and d) making the student available for support in their quest to learn to read English by staying in touch with them. Students will therefore have a more positive outlook on learning to read English since they will feel more confident, independent, and motivated (Tümen Akyıldız & Çelik, 2021). In addition, pupils are able to use WhatsApp outside of the classroom as well. It aids pupils in their quest to master the English language in a short time. Whenever they choose, students can read their professors' assigned things again and again. In the event that a student has questions or concerns about the topic being taught, classmates and professors can be contacted via WhatsApp (Huang and Lin, 2011; Khalaf, 2017; Khan, 2016; Naderi and Akrami, 2018).

In its entirety, the amalgamation of exam preparation, the historical context of the English language, and the cultivation of reading skills through the utilization of WhatsApp engenders a holistic perspective on several academic domains. The process of preparing for tests has been found to enhance students' performance in examinations. Additionally, studying the history of the English language serves to enhance students' comprehension of the language itself. Furthermore, the development of reading skills through the use of WhatsApp contributes to the improvement of students' communication abilities within a modern framework (Aktar et al., 2021; Aktar & Noordin, 2021).

According to the study, the WhatsApp social media app improves students' reading skills due to the various services it provides, such as the ability to introduce audio-visual topic explanations and motivate students to seek knowledge and information on their own (Bouhnik and Deshen, 2014; Costa and Han, 2017), emphasizing the WhatsApp application's key role in creating a student-centred educational environment that is student-centered and student-friendly (Hamad, 2017; Hazaea and Alzubi, 2016).

It is also important to mention that WhatsApp has a positive and significant effect on two critical reading strategies' development: scanning and skimming. Pupils either trust the summary or read through the tales and novels to discover which one seems to be the most intriguing when there are too many to choose from in a text book. For this reason, learners do the scanning for the text, for example. It's a good way to examine how an author dealt with a problem that was mentioned in the summary or that is linked to the source material (Rraku, 2013). If teachers utilize fill-in-the-blanks in reading tasks, pupils are more likely to read their textbooks thoroughly. To find a certain point in the text, they skimming the page or the whole text. Of course, because WhatsApp reading is done for enjoyment, it's likely to entail a lot of reading time (Miangah and Nezarat, 2012; Plana et al., 2013).

6.0 Discussion and Findings

Both instructors and students stand to gain a great deal from using WhatsApp in the EFL classroom while teaching reading. Andujar and Franco Rodriguez (2020) and Motaung and Dube (2020) found that students and teachers were able to communicate and work together more effectively via WhatsApp, which might mean that students were more invested in their reading lessons. Further, Soria et al. (2020) found that WhatsApp may be used to help students with feedback and assistance, which can improve their EFL educational experiences. While teaching reading skills, research by Bouhnik and Deshen (2014) found that integrating WhatsApp into the classroom also helped students develop modern skills like critical thinking, problem-solving, and collaboration. An increase in student engagement and academic accomplishment may be achieved with the use of flipped classroom pedagogies, according to Subramaniam and Muniandy (2019), who argue that WhatsApp makes this possible.

In addition, WhatsApp may facilitate online education, which opens up more possibilities for students in terms of both accessibility and flexibility. In addition, Subramaniam and Muniandy (2019) found that EFL students were more engaged in reading and had better academic results when blended learning was made possible through the use of WhatsApp. Cansoy (2017) states that WhatsApp is now known to be a tool that can help professors create and sustain online reading study groups. This, in turn, can help them advance in their careers and refine their approaches to the classroom. In addition, WhatsApp may be used to assist in incorporating gamification into EFL educational settings for reading skill instruction, according to Díaz-Ramírez's (2020) research. This approach has the potential to improve students' involvement and academic performance. Educators and students alike may get several rewards from incorporating WhatsApp into classroom instruction. The integration of mobile and blended learning, enhanced communication and cooperation, greater feedback and reading comprehension, the cultivation of contemporary skills, and so on are all benefits.

6.1 WhatsApp Aids in the EFL Classroom: Procedures: A Step-by-Step Guide to Using WhatsApp to Teach Reading Skills in English

Teachers must follow a set of instructions if they want to incorporate WhatsApp into their English language instruction. There are a few tweaks to Speroff's (2016) method. Creating a WhatsApp group is the first step a teacher should take. Teachers obtain and store students' WhatsApp numbers on the phone's internal memory. After that, teachers construct a group based on the WhatsApp group of their class. Second, establish the regulations.

Students and teachers must agree on the responsibilities of using WhatsApp. Students are expected to speak politely at all times. To make things even more complicated, they may want to add their own rules about whether or not it is acceptable for students to communicate with their teachers privately outside the classroom or outside of the WhatsApp group. For example, students may want to avoid sending jokes and informal English chats to their teachers outside of the classroom (Alhammari et al., 2017). Step three Staging for classroom usage, Classrooms can be created by teachers. As a teacher, he probably asked his pupils to bring headphones to class one day before (and again the morning of). To accommodate the odd student who doesn't have headphones with them, teachers should keep a stock of affordable headsets on hand that they may loan out to those who need them. Assign the responsibilities in Step four.

However, it must be made clear that WhatsApp is not a teaching tool per se; rather, it is a mechanism for teachers to communicate information with students and for students to share their own work. For example, in huge classes where students don't have enough reading time, it can assist students in improving their reading abilities, while homework assignments and collection can help ease classroom management concerns and help students improve their reading skills individually (Abu-Al-Aish and Love, 2013; Alshammari et al., 2017; Plana et al., 2013).

Teachers can begin by introducing a selected textbook to the class and assigning EFL students' tasks such as summarizing, reviewing, and discussing it (Aktar et al., 2021; Aktar & Noordin, 2021). Four assignments can be given to each student, each with an example of a textbook and a study of it: a) Summarization of Text. b) Questions and answers c) True or False d) Find a review that students will find useful (Tümen Akyldz & Elik, 2021; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019).

To that end, instructors should model good reading habits for their pupils by reading aloud to them and modelling good reading skills themselves. They could also create ways to fill in the gaps in their curriculum, such as by teaching a novel in EFL class or hosting literary circles. Decoding, fluency, vocabulary, sentence structure, cohesiveness, reasoning, and background knowledge may all be improved using this method, which are all six essential elements for reading skills (Manoli & Papadopoulou, 2012; Jasrial, 2019). Teachers can also teach students how to master scanning and skimming skills so that they can increase their reading speed. Nevertheless, reading is more than just deciphering the meaning of a jumble of letters and words; it's a mental process in which the reader employs a variety of tactics to deduce the author's original goal. The reader's schemata, or pre-existing knowledge and information about the subject, are drawn upon to reconstruct the text's meaning. In the study of text comprehension, researchers found that the reader processes textual material, such as letter forms and sounds, word meanings, and grammatical information, according to his or her pre-existing schema. As a result, teachers should assist students in developing the ability to analyze content in a somewhat accurate manner.

It is also necessary for English as a second-language student to be taught some reading skills, such as previewing and forecasting a text's end, challenging the author's objectives, or discovering links between concepts, in order to read well in this language. One skill at a time is the best way to teach these abilities to students (Tümen Akyldz & Elik, 2021; Alshammari et al., 2017; Plana et al., 2013). Students may be instructed to work on a single skill with a partner and share their ideas with one another in order to enhance their grasp of the skill. Students who want to become fluent English readers must have these abilities mastered. Teaching pupils to re-imagine a tale from a different perspective in order to analyse its meaning might motivate them to undertake critical reading and transliteration (Abu-Al-Aish and Love, 2013; Alshammari, Parkers and Adlington, 2017; Jasrial, 2019).

6.2 The process of using WhatsApp to teach reading skills

To improve reading comprehension. During the designated time period, reading passages from the "Select Readings" book should be used to educate selected students' classes via WhatsApp groups (Abu-Al-Aish and Love, 2013). Once a week, while teaching through a WhatsApp group, a time range (one and a half hours) can be established for EFL students to teach the passages. This time period was chosen because, while regular English classes at the higher secondary level last an hour, this session requires additional time to engage students teaching through a WhatsApp group. All students must be online at that time (Abu-Al-Aish and Love, 2013; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019).

The instructor will first write down some of the passage's most significant and crucial vocabulary terms with their synonyms, after which pre-reading questions will be answered and students will express their opinions in small groups under the teacher's supervision. Following that, students will be given a brief period of time to read the work independently and communicate the major points of the text with one another (Wang and Smith, 2013; Wang, 2017; Alshammari et al., 2017; Plana et al., 2013). The teacher can submit the text as an audio file to the group chat, which the students can listen to.

Finally, the following comprehension questions and activities can be completed in groups

with the collaboration of students and under the supervision of the teacher. Students are expected to discuss their related questions, ideas, and issues in groups rather than alone, so that the whole learning experience becomes more engaging with everyone's participation (Plana et al., 2013). They might converse with one another about their passage during that time period, but without obtaining an evaluation from their teacher during that contact time (Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019). In the following session, the teacher will monitor what has been shared in the group, including some questions, answer any questions related to the previous session, and correct students as necessary. The teacher will also check students' work and provide feedback before beginning to teach the new passage (Jasrial, 2019).

6.3 Creating reading tasks for EFL learners

Documents, reading texts, electronic sources, audio, video, and pictures are all acceptable forms of media for reading activities. What this means is that students may be given reading assignments in various formats through their cell phones. The reading material could be shorter, making it easier for learners to read. By providing students with real-life resources such as jokes, short articles, videos, audio, and photos, reading exercises on WhatsApp groups help them improve their reading comprehension skills, which is something they've previously studied in class. This activity does not transform classroom reading into group activities on WhatsApp. The fact that it may be accessible from any location at any time is another use for these activities.

6.4 The theoretical foundation of the process uses Scaffolding theory in EFL reading skills teaching with WhatsApp

The approach is based on the "scaffolding" principle, which has been widely and diversely applied in literacy classrooms and is defined as the transfer of task duty, responsibility, and authority from the instructor to the student (Kim & Hannafin, 2011). According to this theory, when the WhatsApp strategy is used in literacy instruction in an EFL environment, students' initiative and engagement are prioritised. Teachers simply cooperate, transforming the classroom into a student-centred environment. In the digital age, a WhatsApp literacy lesson may help pupils become more motivated and entertained. Indeed, Jerome Bruner, a cognitive psychologist, proposed the notion of scaffolding theory in the late 1950s. He used the word to refer to the spoken language learning of young infants (Kim & Hannafin, 2011). When young children are learning to speak a language for the first time, their parents and carers provide informal frameworks that aid in their learning. In its more common usage, "scaffolding" refers to a temporary structure that is frequently erected during the construction of a building (Kim & Hannafin, 2011). The scaffold is removed once each section of the new structure is completed. Thus, in the use of interactive WhatsApp in literacy instruction for higher secondary level EFL students, students serve as the class's owners, while teachers serve as collaborators. Teachers transfer control of the classroom to their pupils. Students are focused in this class by choosing a topic that interests them and a presentation style that is comfortable for them (Kim & Hannafin, 2011).

6.5 Conceptual Scaffolding

Conceptual scaffolding helps learners decide what to consider in learning and guides them to key concepts. Conceptual scaffolding guides the learner regarding what to consider during learning. One of the strategies is using knowledge maps to scaffold learning (Kim & Hannafin, 2011). Below are the benefits of using knowledge maps: reducing cognitive load, facilitating the representation of relationships, facilitating higher-order learning (analysis, synthesis, evaluation), providing many paths for knowledge retrieval, and supporting the communication of knowledge. The three characteristics of this theory are contingency, where only help is given when needed. The temporary principle of scaffolding is reduced or removed when learners become competent to solve any issues. The transfer of responsibility for successful performance

gradually shifted from the teacher to the learners (Kim & Hannafin, 2011).

6.6 The facility of WhatsApp for reading activities for EFL students outside of the classroom.

Several nations use WhatsApp as a formal education tool, particularly for incorporating graded learning activities into non-classroom settings. In the modern era of online education, the most user-friendly and widely used app is WhatsApp. It doesn't necessitate any special hardware or software, and anyone with a smartphone can use it. This makes it a great tool for education both in and out of the classroom. Educators and students of English as a foreign language have recently adopted WhatsApp for learning outside of the classroom (Juliana, 2021).

6.7 WhatsApp can be a helpful tool for English as a Foreign Language (EFL) students to improve and learn reading skills outside of the classroom

Language Exchange Groups: In this facility on WhatsApp, participation in language exchange groups affords EFL students the opportunity to engage in reading exercises and communication with native speakers or other learners outside the classroom. The act of exchanging written materials, such as texts, articles, or short tales, has the potential to enhance pupils' reading comprehension abilities. **Virtual Book Clubs:** English as a Foreign Language (EFL) students have the opportunity to establish virtual book clubs on the messaging platform WhatsApp, where they may engage in discussions and critical analysis of various literary works and reading materials outside the classroom. This practice enhances reading involvement and facilitates the cultivation of critical thinking abilities among kids (Tümen Akyldz & Elik, 2021; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019).

Vocabulary and Reading Challenges: English as a Foreign Language (EFL) learners have the opportunity to establish vocabulary and reading challenges through the use of WhatsApp. This platform facility allows them to exchange intriguing or demanding vocabulary terms, idiomatic expressions, or phrasal verbs outside of the classroom. Subsequently, individuals have the opportunity to employ these vocabulary terms inside phrases or brief paragraphs, honing their aptitude for comprehending written text and refining their written expression.

Daily News Digests: Participating in WhatsApp groups that disseminate daily news stories or synopses can provide EFL students with exposure to contemporary events and diverse writing conventions. Engaging in this activity facilitates the development of reading comprehension abilities and contributes to a more comprehensive grasp of the language outside the classroom in WhatsApp (Jasrial, 2019; Khan, 2016; Plana et al., 2013).

One potential method for EFL students to receive reading support is through the utilization of peer-to-peer interaction on the messaging platform WhatsApp. By connecting with their classmates or language partners, students may engage in collaborative reading activities and receive assistance in comprehending and analyzing texts in WhatsApp. Individuals have the ability to inquire about various aspects of the text, request further explanations for challenging sections, or engage in discourse pertaining to their personal understandings and analyses of the material. This promotes a cooperative learning atmosphere and enables pupils to improve their reading skills.

6.8 Outside of the classroom, WhatsApp may offer a variety of interactive reading activities for EFL students

Group conversations outside the classroom: Using WhatsApp's chat function, students may form study groups and have in-depth conversations about the assigned readings. Reading may become

more of a collaborative effort when students are able to comment on passages, pose questions, and talk about what they've learned with their peers. Peer Review: EFL students can use WhatsApp to distribute and receive feedback on written assignments and reading summaries. The availability of peer feedback in the form of recommendations, corrections, and emendations makes collaborative learning and the development of linguistic competence possible.

Students may expand their vocabularies by using WhatsApp to discuss and share interesting new words and phrases they come across in their reading. They can form a vocabulary group to help each other learn new terms and have a better understanding of how to use them correctly (Mujayanah et al., 2023; Malilla & Irwandi, 2022). Students may organize WhatsApp-based book clubs to discuss and analyze a common reading selection outside the classroom. Through engaging in in-depth conversations on specific chapters, passages, or topics, readers can improve their reading comprehension and analytical thinking.

Teachers can create reading competitions and challenges on WhatsApp for outside the classroom. Teachers might have students read brief sections from a variety of materials, then ask for summaries, responses to comprehension questions, and class discussion. This promotes consistent reading and interest in the subject matter. Students can summarize the reading or discuss their opinions by recording an audio message and sending it to a classmate via WhatsApp. This provides an opportunity to hone one's oratorical abilities and provides an alternative to only relying on textual language (Indiran et al., 2022).

Multimedia Sharing: WhatsApp's multimedia sharing features might help students get more out of their reading. They may make the reading content more interactive and aesthetically interesting by posting related pictures, videos, and articles. Language Exchange: WhatsApp allows EFL students to communicate with native speakers or students learning the same language. Sharing articles or tales written in the target language and having in-depth discussions about them with language partners is a great way to practice reading and improve language abilities outside the classroom (Syairofi et al., 2023). As a whole, WhatsApp is a fun and useful tool for EFL students to do reading-related activities together outside of class. It's a great way to strengthen language abilities, encourage regular reading practice, and connect with others (Mujayanah et al., 2023; Malilla & Irwandi, 2022). With this information and findings, it is positively supporting the first objective, and the first objective is fulfilled precisely. From the critical analysis and discussion, the second objective was proven precisely.

Filling in the gaps A pupil selects a longer sentence from their textbook. The learner completes the statement by writing it with one word missing and filling in the space. They post it to their WhatsApp group, where other members will read it in its entirety and provide the missing information. The student must provide the missing word (Huang and Lin, 2011). After that, a mistaken wording Picking out a sentence, one pupil peruses their textbook. While composing the statement, they make an error in language, spelling, or grammar. Other students will read it and make the edits via WhatsApp when they submit it to a classmate for correction. Students are then asked to return the corrected version over WhatsApp so that the group may review it. Taking the odd one out One student writes four words. The fourth word must differ in some way from the previous three. The four words are sent to their friend, who will then read them. Everybody else has to find the outlier and explain why they picked them (Güler, 2017).

In general, WhatsApp offers a convenient platform for English as a Foreign Language (EFL) students to establish connections with peers, access a wide range of reading resources, and participate in diverse reading activities that can effectively contribute to the enhancement of their reading proficiency. Thus, two objectives are fulfilled.

7.0 Strengths, Weaknesses, Implications and Recommendations for Future Research of using WhatsApp to teach reading skills

Literacy skills are critical for all students at the higher secondary level to develop in order to obtain access to knowledge during their academic careers. Indeed, many of them struggle to grasp their academic reading materials and read superficially, and the majority of them are motivated to develop literacy. As a result, improvements to the traditional method of teaching literacy are required. Adopting WhatsApp aids can help make literacy classes livelier and more enjoyable, while also increasing students' motivation. The main and first strength is that using WhatsApp can remove the monotony of teaching and learning and can extend the reading habits of students outside the classroom (Jasrial, 2019; Khan, 2016; Plana et al., 2013).

The second strength is that students can take as much time as they want and can use a digital dictionary for meaning and pronunciation. The third strength is that it will be students' centered teaching of reading skills. Their weaknesses and strengths will be analyzed as well as prioritized so that they can receive flawless attention to develop reading skills. The fourth strength is that it will create a platform for all students to interact with each other, and teachers can become more dynamic facilitators for teaching reading (Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019). According to a recent study, WhatsApp can help with reading and set the rationale for using it. The following benefits are:

1. In place of virtual classrooms, WhatsApp was used to aid students who were missing from class.
2. Because their instructor is constantly nearby via WhatsApp, students feel more secure in asking questions and getting answers via the app.
3. It facilitates students' conversations and helps pupils overcome their apprehension about using the language and reading skills.
4. As a fourth benefit, it helps pupils improve their reading strategies.
5. Students can learn from their peers' blunders (Tümen Akyıldız & Çelik, 2021; Alshammari et al., 2017).
6. It gives children confidence and boosts their self-esteem (Jasrial, 2019).
7. It helps students improve their reading skills and overall desire to learn (Tümen Akyıldız & Elik, 2021; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019). After all, every approach has some drawbacks. The main drawback is seamless access to the internet. Every student may not have this advantage. Another disadvantage is that teachers cannot always control their students outside of class (Khalaf, 2017; Khan, 2016; Plana et al., 2013).

Recommendation: To overcome this approach's weakness, preventing students' addiction to technology entails creating a balance within students' lives (Plana et al., 2013; Jasrial, 2019); thus, students do not misuse their technology as an escape from real-world issues, emotions, sociability, or identity. Online activities should be balanced with real-world experiences and interactions. Teachers should remain careful and counsel students regularly to prevent overuse of WhatsApp (Tümen Akyıldız & Elik, 2021; Alshammari et al., 2017). 1) To improve its strengths, teachers must present all the beneficial factors of WhatsApp to students. 2) Teachers must motivate the students to use it (Khan, 2016).

The study and use of WhatsApp for teaching English-language reading skills may have far-reaching implications. It makes the setting more approachable and engaging for students to engage in reading practice, peer interaction, and feedback. Furthermore, it provides instructors with a powerful tool for personalization and differentiation, addressing the specific needs of each student and promoting a collaborative learning environment. WhatsApp might be used to teach reading skills and improve realistic language learning experiences by bridging the gap between formal classroom instruction and informal, daily language use.

This paper can be taken as motivation for future research. The promotion of reading

comprehension skills among EFL students, strategies for improving reading skills through audio messages and video calls, encouraging collaborative reading practices through group discussions and peer feedback, incorporating multimedia resources into reading activities, and investigating the potential of WhatsApp as a tool for individualized reading instruction should all be the focus of future research on using WhatsApp to teach English language reading skills. A more engaging and encouraging learning environment may be created by using reading activities based on WhatsApp to analyze social interaction and community formation. To make the most of WhatsApp's potential for successful language instruction, challenges and restrictions related to utilizing it to teach reading skills, such as possible distractions or privacy problems, should be taken into consideration.

8.0 Conclusion

In deduction, regardless of its drawbacks, WhatsApp can still be considered a useful approach for teaching literacy to pupils at the upper secondary level in English as a Foreign Language (EFL). When there is audio, video, or visual content to accompany the text, students will have an easier time understanding it. Students' literacy skills might be improved by using this technology in the classroom (Tümen Akyıldız & Çelik, 2021; Alshammari et al., 2017; Plana et al., 2013; Jasrial, 2019). Digital technologies might be used in the classroom in the twenty-first century to freshen things up and keep the information interesting (Miangah and Nezarat, 2012; Plana et al., 2013). The instructor may use WhatsApp chat in a variety of ways to teach reading skills. Students' interest in reading the content can be increased by using WhatsApp messaging to teach reading comprehension. Additionally, it improves kids' reading comprehension. Rather than reading a written paper or book, the pupils are more interested in utilizing WhatsApp to improve their reading skills. They enjoy using WhatsApp to communicate information, tasks, assignments, videos, music, and pictures, solve difficulties outside of class, and pass the time they would otherwise spend reading. WhatsApp may be utilized in the classroom to improve pupils' reading abilities (Mujayanah et al., 2023; Malilla & Irwandi, 2022).

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Utilizing Literary Theories in the ESL Learners' Classroom

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Abstract

The theory of literature provides a full and realistic explanation of literature, which is crucial to reading the book for a variety of reasons. The objective of the study is to detail the text with critical information for students by applying literary theory for the betterment of the study and making the text more approachable for English as a Second Language (ESL) readers. Literary theories are frequently a continuous process because they are, by their very nature, subjective. People may have different perspectives on the same story, but as long as theories can support them, all perspectives are valid. Students' and teachers' brains will be stimulated, and their future thought patterns will be shaped through research on literary theories. The authors identify a few major theories, such as feminist theory, Marxist literary theory, new criticism, postcolonial theory, historical criticism, and psychoanalytic criticism, that are often employed in the ESL classroom. These theories can explain any literary work in a variety of ways to advance knowledge and understanding. Books, journal articles, and critique papers are employed as secondary resources to gather the data and material for this study. The results demonstrate the significance of literary theories for learning and knowledge expansion. The contribution of the article is that, despite their complexity, literary theories allow readers to analyze any literary work and get new information that will aid in their moral and intellectual development. Literary theories may assist ESL learners in growing in their tolerance for diversity, comprehension of literary texts, and understanding of various cultures. Following a theoretical analysis, literary works provide a wealth of linguistic input, serving as examples of various settings and introducing new concepts while also assisting learners in honing their speaking, listening, reading, and writing skills.

Keywords: *ESL classroom, Literary Theory, Feminist theory, Marxist literary theory, New Criticism*

1.0 Introduction

Literary theory offers a rigorous examination of literature, serving several functions within a work. At its most fundamental level, the primary objective is to enhance the comprehensibility of the text for its readers. In order to comprehend the content of the book, or at the very least, interpret its intended message for oneself, the process is typically ongoing because of the inherent subjectivity of ideas (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023). Individuals may possess distinct and varied interpretations of a narrative, although the validity of these views hinges on their ability to provide sufficient evidence and justification (Wimsatt & Brooks, 2022; Zhenzhao, 2023). The study of literary theories can prove advantageous for ESL (English as a

Second Language) students, fostering the development of their cognitive abilities and enhancing their capacity for logical and critical thinking, thus preparing them for future growth and intellectual advancement (Selden, Widdowson, & Brooker, 2013). A regular and essential part of the English as a Second Language (ESL) curriculum is literature and literary theories. Literary theories can motivate students to read English. Literature is an ideal method for teaching language use and cultural norms, making it useful for all pupils.

Literary theories encompass both intellectual and practical dimensions on a profound scale. One of the practical aspects is comprehending the methods employed by a writer to achieve the objectives and convey the intended significance of their work, as well as the underlying motivations behind their choices (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023). The study of literary theory, as well as various forms of art, has the potential to inspire and bring about personal transformation. By gaining insight into an author's creative process, individuals can enhance their cognitive abilities, assimilate inspiration and technical skills, and ultimately apply these newfound perspectives to derive novel life lessons (Pujianto et al., 2014).

As a philosophical concept, literature theory belongs to the humanities, as its central goal is the comprehension of mankind. The act of interpreting a literary work involves the process of reading and synthesizing comprehension, which closely resembles the transfer of thoughts. Examining the intricate details of a narrative and deconstructing it imparts valuable insights into the diverse perspectives through which individuals perceive the world, encompassing both historical and contemporary contexts (Bertens, 2012). This enables us to engage in deeper discussions and get a little better understanding of ourselves and the nature of life. The field of literary theory is predominantly rooted in philosophical principles. The objective of this endeavor is to gain a comprehensive comprehension of the essence of literature. This means looking for a philosophical framework that supports learners' particular interpretations and then figuring out how to use this perspective to analyze literature in a way that makes it easier to explain learners' ideas to others and encourages the creation of new interpretations. The philosophical disparities encompass a wide spectrum, spanning from aesthetic to esoteric considerations (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023).

An illustrative example is the ongoing discourse between the 'New Critics' and the 'Historicists'. The former faction contends that comprehension of a literary work can solely be derived from the text itself, disregarding any external factors. Conversely, the latter group maintains that a critic can genuinely interpret a book only by comprehending the contextual elements surrounding its creation, such as the historical period, the author's personal life, and their beliefs beyond the confines of the written work. When examining Shakespeare's, *The Tempest*, one might adopt a feminist perspective to analyze the work. This perspective focuses on the character of Miranda, who is the sole female character in the play and embodies the Victorian ideal of femininity. By applying feminist theory to the text, a fresh interpretation of *The Tempest* can be derived. Colonialism, specifically in the context of the play, is the seizure of the island, which serves as the authentic dwelling place of Caliban, by Prospero. The individual in question is subjected to treatment akin to that of a subordinate laborer. The application of colonist philosophy to the situation of colonialism elicits a profound sense of shock.

According to Eagleton (1991, cited by Sigurdson, 2013), there is a correlation and interdependence between literature and theory. Both of these concepts aid individuals in comprehending the practical implementation of each. Literary theory may be likened to a selection of opticians' glasses, whereby individuals experiment with different colored lenses through which to perceive the world (Sigurdson, 2013), ultimately settling on the one that resonates best with their personal preferences. Occasionally, readers engage in the act of seeking entertainment and afterwards respond with perspectives that imbue their experiences with significance. This article asserts that the incorporation of literary theory in the study of texts enables students to engage in critical analysis and acquire comprehensive information. The use of these theories equips students with the necessary foundational knowledge to effectively

approach their studies (Fairclough, 2013). Whether literary theories categorically aided learners to learn or how far these theories aided students is still not precisely indicated. Consequently, based on the previous research and document analysis, this paper has the following objectives:

- a) To analyze the text with critical and elaborate information using literary theory as a helping tool for ESL learners.
- b) To detail the literary theory for the betterment of the ESL learners' study.

2.0 Literature Review

Literary theories that incorporate the examination of literature are intrinsically genuine and offer genuine input for ESL language learning (Ghosn, 2002). Maley (1989a) defines literature analysis and literary theories as the exploration of significant and personally meaningful subjects. Authenticity is a crucial requirement in modern literature in ESL, naturally found in literary writings with literary theory. The concept of authenticity is particularly applicable to plays and novels. When analyzing theater via theoretical notions, ESL learners engage in discussions, convey emotions, use functional words, and employ contextualized expressions. Similarly, the use of descriptive writing and literary theories in novels enhances the creative aspect of human nature. Consequently, language is effectively imprinted in the minds of ESL students.

Literary works analyzed by literary theories are highly inspiring because of their genuineness and the significant context they offer (Ghosn, 2002; Van, 2009). Literary theories explore intriguing subjects and often exclude dull content, which motivates ESL learners to study (Maley, 1989a). Motivation is a crucial factor that may propel ESL learners to progress. Students are particularly motivated when they are exposed to activities that they genuinely like. Research demonstrates that ESL pupils have a strong will to learn when presented with texts and theories with the aim of language acquisition (Amer, 2003; Ahern, 2018).

Especially in this age of globalization, literary theory allows ESL students to become more culturally and interculturally conscious (Van, 2009; Tayebipour, 2009). More and more, in this age of globalization, people are thinking about what everyone else needs and desires rather than what they need for themselves. Many feel compelled to use literature as a springboard to improve their language skills since it addresses universal themes (Maley, 1989a). Joining forces in ESL and other language-related domains is a cry from the globalization anthem. All civilizations and languages have common ground with literature, which explores universal themes like love, hate, death, nature, etc. (Maley, 1989a). Cultural and linguistic similarities and contrasts can help us learn more about the globe (Amer, 2003; Ahern, 2018).

According to scholarly literature in the field of psychology and brain research, it has been shown that ESL learners tend to acquire knowledge and skills most effectively when they are presented with a task or problem that is appropriately challenging, which can be presented with literary theories (Fairclough, 2013; Bess, 1997; Hall & Cook, 2012). For those who are new to the topic of theory, it is advisable to acquire knowledge through publications that provide comprehensive summaries incorporating advanced technological elements and intricate theoretical notions (Fairclough, 2013; Bess, 1997; Hall & Cook, 2012).

Contemporary research in the field of educational theory and practice advocates for the cultivation of higher-order cognitive abilities among ESL pupils. The focus is placed on the development of ESL students' abilities to make informed decisions, create opportunities, assess available resources, devise multiple solutions for efficient problem-solving, and adapt to the globalized multicultural society of the present era (Geertsen, 2003; Feden & Vogel, 2003; Halpern & Hakel, 2003). Theories and methods have a crucial role in enhancing and developing ESL learners' aesthetic and linguistic understanding, enabling them to interpret historical texts as presented by authors and poets (Beach et al., 2016; Naji et al., 2019; Regmi, 2021).

The definition of literary theory as a subset of critical theory used to analyze and explain literary works by Eagleton and Culler (1997, cited by Ferianda, 2017) also influenced how people perceived it. The authors further argued that underlying assumptions or principles that are applicable in a variety of interpretative contexts and circumstances are the source of literary theory. Moreover, it was additionally said that literary theory consistently engaged with a conceptualization of the external world beyond the confines of the text for ESL learners (Ferianda, 2017; Haines-Eitzen, 2015; Shaikh, 2016). According to Gibova's (2017) research, literary texts are derived from human experiences. The author emphasizes that these texts are created with the intention of conveying the author's emotions or sentiments, which are influenced by their personal perspective on their own experiences. In literary texts, philosophers prioritize the communication of the author's intended message rather than solely or mostly emphasizing the content (Ferianda, 2017; Haines-Eitzen, 2015; Shaikh, 2016).

According to Bertens (2012), literary theory may be more precisely characterized as a distinct type of literary criticism that involves the systematic use of academic, scientific, or philosophical methodologies in the analysis of literary works. Literary theory may be seen as a rigorous examination of the essence of literature and the methodologies employed in its analysis. Nevertheless, it is worth noting that literary scholarship from the 19th century onwards frequently encompasses, in addition to or instead of literary theory in its strictest form, reflections on intellectual history, moral philosophy, social prophecy, and other interdisciplinary subjects that bear significance to the manner in which ESL learners perceive and derive meaning. The existing body of literature indicates that literary theories have a substantial impact on ESL students' educational experiences within the classroom setting (Beach et al., 2016; Naji et al., 2019; Regmi, 2021).

3.0 Background of the Study

In order to comprehend the significance of acquiring knowledge in literary theory from a pragmatic standpoint, it is imperative to recognize that the contemporary world has seen an increase in complexity, both in terms of intricate details and the breadth and depth of information required to effectively navigate within it (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023).

The disciplines of literature and the arts are widely regarded within academic circles as very captivating. The assumption made pertained to what Lyotard (1988, cited by Bennett & Royle, 2023) referred to as grand narratives, or widely acknowledged belief systems and ideologies, encompassing concepts such as truth, justice, and the American way. In historical times, males were often seen as strong and robust individuals, whereas women were typically perceived as more modest and unassuming. Presently, the global community is experiencing significant divisions characterized by profound cultural and ideological disparities (Bennett & Royle, 2023). Consequently, it may be inferred that contemporary literature necessitates a departure from the unidirectional approach employed in previous years while reading and analyzing literary works. The reflection of societal perceptions is a fundamental aspect of literature.

According to Bonomi (2017), the field of psychology, as influenced by Freud, has fragmented human behavior into several components, leading to difficulties for contemporary ESL learners in distinguishing between the ego, superego, and ID. The school of deconstruction, spearheaded by Derrida, has exerted a significant effect on scholars within the academic community, propounding the notion that meaning lacks inherent stability and that the concept of a definitive essence is fundamentally elusive. Scholars such as Cixous, Irigaray, and Kristeva have conducted extensive research on the concept of womanhood within a societal context where both men and women often struggle to comprehend the nature and expectations of gender dynamics (Lauwo, 2018). If contemporary students fail to acquire proficiency in the verbal and

theoretical aspects of literature, they will be unable to effectively interact with future generations. Learning theories play a crucial role in the education of pupils (Richards, 2017).

4.0 Methodology

This is library research, where information is obtained from a variety of sources, including published books, journals, articles, websites, and research papers. The theories enable them to realize the deeper meaning of a text. If this information is made public, students and other professionals will be better equipped to understand how the literary text actually reflects the situation in life and society. This may be used as a reference to find the allegorical and symbolic meaning of text in different phrases (Gideon, 2012).

Initially, research objectives are established. The eligibility of the research publications was determined based on their titles and an examination of their abstracts. The second search process for data collection included online and offline publications, including the Online Digital Library, ScienceDirect, SpringerLink, Research Gate, and Google Scholar.

Third, there are criteria for inclusion and exclusion. Some inclusion criteria are examined while doing a systematic literature review. To begin, a collection of papers from the source online and published was evaluated and sorted, with priority given to published papers from peer-reviewed journals and conference papers. As a result, all papers must be written in English. The primary focus was on the topic of literary theories and ESL students. Exclusion rules are also applied to the Systematic Literature Review (SLR). Papers not prepared in English or other languages were immediately disqualified from this SLR. Finally, papers that met the inclusion and exclusion criteria were shortlisted and examined for final consideration.

Fourth, quality assessment Articles are included based on facts that clearly present aspects of employing literary theory for ESL students. Then, summarizing all of the selected publications and recording the findings for this research.

5.0 Significance of literary theory in ESL (English as a Second Language) classroom

Literary theory serves several functions. The primary objective of a sound literary theory is to provide ESL readers and writers with a novel perspective on the act of reading and writing, one that has not been previously altered in the particular manner that the author aims to achieve. Typically, however, despite the forerunner of a theory being well recognized and renowned, it necessitates a considerable duration of many years, if not several decades, subsequent to its formulation by the author before the theory attains establishment and widespread practical application. The hypothesis positing the lack of use in employing ancient theories in modern times holds a certain degree of merit. Nevertheless, hypotheses of a rather antiquated nature, which have been in existence for almost 50 years, have undergone extensive experimentation and evaluation. They are not flawless in any circumstances at all times. By that moment, we possess a comprehensive understanding of both their positive attributes and their shortcomings. It is evident that some sorts of texts may be effectively analyzed by applying a certain, established theory (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023).

6.0 The role of literary theory in the study of literature is to analyze the text with critical and elaborate information, using it as a helping tool in ESL learners' classrooms

The genesis of theories may typically be traced back to a response to prevailing circumstances. The emergence of the psychological school was largely attributed to the extensive influence of Freud (Gabriel et al., 2022; Boyle, 2023; De Santis, 2023). According to Gabriel et al. (2022), the contributions of Jung and Lévi-Strauss played a significant role in the proliferation of

mythological critique. The emergence of ideologies such as feminist theory, Marxist literary theory, new criticism, postcolonial theory, historical criticism, and psychoanalytic criticism may be attributed to the human need for enhanced and intricate methods of interpreting their surroundings. When considering the concept of a text, it is important to recognize that the term encompasses a wide range of objects and phenomena (Boyle, 2023; De Santis, 2023). As a result, the primary objective of literary theory is to provide ESL readers with a reliable framework for interpreting and analyzing texts. A proficient critical reader possesses the ability to effectively integrate many perspectives into a given book, discerning the interconnectedness of distinct ideas and the interplay between various texts. This particular mode of reading engenders a sense of amusement and enriches the textual experience for ESL pupils (Tihanov, 2022).

Utilizing literary theories has aided ESL students and teachers in the following ways: Firstly, it helped to analyze literature about culture, society, and differences among different groups of people in the world. Secondly, find out the exquisiteness of language and sentences, the powerful imagination, authorship, and originality, or the creation of word-based art. Is it about status, elitism, high culture, belles lettres, or just plain self-expression in its most democratic and egalitarian sense? Thirdly, find out the prospects or failures of communication and representation through language (Boyle, 2023; De Santis, 2023). Fourthly, critically examine the human psyche and what it exposes or hides with words and sentences. It will also examine identity and the exemplification of characters as keys to figuring out what it means to be human. Fifthly, to analyze literature history, either by making it, reflecting it, or redesigning it.

Literary theorists create books and articles decoratively that give ESL learners useful terminology for the elucidation of these perceptions that are implanted deep within the literature students read. The following list identifies key theoretical questions, theories, and theorists who may help us to clarify and enhance the underlying assumptions we already make when reading and analyzing any literature. Combining theories and drawing connections across theoretical schools and major concepts is a common way for today's critics to add their contribution to the critical conversation (Beach et al., 2016; Naji et al., 2019; Regmi, 2021).

Theory can provide valuable insights into understanding life and our world from fresh perspectives. These insights can have a profound impact on how authorities approach the education of children, whether as parents or teachers. Additionally, theory can inform our responses to individuals with whom people hold differing views on social, religious, and political matters. Furthermore, theory can aid ESL learners in recognizing and addressing their intentions, uncertainties, and desires (Gabriel et al., 2022; Boyle, 2023; De Santis, 2023).

If learners hold the belief that human creations, encompassing not only literature but also fields such as film, music, art, science, technology, and architecture, are manifestations of human encounters and thus convey human desires, conflicts, and potential, then learners can acquire valuable insights about collective identity by studying and comprehending these creations (Ellis, 2022; Wimsatt & Brooks, 2022; Zhenzhao, 2023). Critical theory provides valuable tools for examining and understanding the world and life from fresh perspectives. These tools not only enhance ESL learners' ability to think logically and creatively but also offer valuable insights (Gabriel et al., 2022; Boyle, 2023; De Santis, 2023).

In order to enhance English language proficiency and adequately prepare for examinations, it is advantageous for ESL learners to engage in the study of language theories, engage in diverse reading practices, and acquire a comprehensive understanding of the historical development of the English language. In addition, engaging in the practice of solving sample test questions and reading relevant resources can assist learners in becoming acquainted with the conventional structure and style of the exam that are typically employed in student preparation (Aktar et al., 2021; Aktar & Noordin, 2021).

7.0 Discussion

ESL learners can employ literary theory as a useful tool when examining text-based content that contains critical and detailed elaboration. Literary theory comprises diverse methodologies and viewpoints that can enrich the comprehension and analysis of literary texts, providing ESL learners with perceptive and profound insights. For instance, when an ESL learner seeks an analysis of a particular literary piece, the search results can provide both broad information about the work and in-depth perspectives using literary theories such as feminism, post-colonialism, or any other applicable method. This facilitates the expansion of ESL learners' comprehension of the text and enhances their aptitude for critical thinking (Gabriel et al., 2022; Boyle, 2023; De Santis, 2023).

7.1 Feminist theory

Feminist literary criticism emerges from feminist theory and examines a text from the perspective of feminism, feminist theory, and feminist politics. Feminist literary theory and criticism have always sought to reexamine works traditionally considered part of the literary canon. Feminist theory's precise aims include the development and discovery of female literary heritage as well as the re-examination of previously read works (Treichler & Wartella, 2022).

Feminist theory can significantly aid ESL (English as a Second Language) learners in understanding literary materials. There are several ways in which feminist philosophy might be advantageous. Feminist theory promotes the examination and defiance of conventional gender norms and stereotypes depicted in literary works. ESL learners can utilize this perspective to identify and analyze characters, plotlines, and themes that either uphold or question gender-based norms (Treichler & Wartella, 2022).

Exploring Power Relations: Feminist philosophy instructs ESL learners to scrutinize power relations across genders, enabling a more profound comprehension of character motives and interactions. Through the analysis of power disparities, English as a Second Language (ESL) learners can acquire a deeper understanding of the intricate dynamics shown in literary works. Emphasizing Feminine Narratives: Feminist philosophy prioritizes the significance of focusing on women's experiences and viewpoints. ESL learners can gain advantages by examining texts that emphasize the voices of women, which facilitates a more thorough comprehension of the wide range of human experiences (Singh, 2022; Angeles, 2023).

7.1.1 Feminist literary criticism may use any of the following methods:

Reviewing the ideas and approach that women characters are designated in novels, stories, plays, biographies, and histories, especially if the author is male, because male writers may have social prejudices Analyzing how one's own gender conceptions affect reading and understanding a text, what features characters' have, and how the reader identifies them depending on the reader's gender Analyzing the concept of how autobiographers and biographers of text treat their subjects and how biographers treat women who are secondary to the main subject (Singh, 2022; Angeles, 2023).

Feminist literary criticism is distinguished from gynocriticism because feminist literary criticism may also investigate and criticize the literary works of men. If teachers apply this theory to classroom reading, then teachers and pupils will know social, economic, and political aspects based on literature, which will bring new knowledge (Singh, 2022; Angeles, 2023).

7.2 Marxist literary theory

According to Stones (1998, cited by Ahmed et al., 2023), ESL learners can derive multiple

benefits from Marxist literary theory when it comes to comprehending literary materials. Firstly, it facilitates the examination of literature via a socio-political lens, enhancing comprehension of the cultural and historical milieu in which a piece originated. This viewpoint enables learners to identify the social hierarchies, power relations, and socioeconomic conflicts portrayed in literature (Bezar et al., 2023). Moreover, Marxist theory highlights the scrutiny of ideology and the depiction of socioeconomic classes in literary compositions. ESL learners can acquire knowledge on how authors analyze or support prevailing ideas through their writing, thereby obtaining a deeper understanding of diverse viewpoints and belief systems (Ahmed et al., 2023; Moore et al., 2006, cited by Rumsey et al., 2008).

Marxist literary theory also advocates for the examination of characters' motivations, relationships, and actions in connection to their social contexts (Remien & Slovic, 2022). This method assists English as a Second Language (ESL) learners in understanding the intricacies of character development and the impact of society on individuals (Ahmed et al., 2023; Moore et al., 2006, cited by Rumsey et al., 2008). Moreover, the study of Marxist ideas in literature improves the critical thinking abilities of ESL learners. It motivates individuals to interrogate the existing state of affairs, contest prevailing narratives, and cultivate their own understandings of literary works (Ahmed et al., 2023; Moore et al., 2006, cited by Rumsey et al., 2008).

Marxist critique is not just about the "sociology of literature," but also about how novels are produced and whether or not they represent the working class. The purpose of this exercise is to help readers better understand a literary work by paying close attention to its structure, language, and nuances. Understanding the historical origins of cultural forms, styles, and meanings is equally essential (Bezar et al., 2023). According to Remien & Slovic (2022), famous critic Raymond Williams applied this theory to literary analysis by analyzing pastoral literature in his book *The Country and the City* to demonstrate that the English aristocracy obscured the plight of the working-class peasants who toiled in appalling conditions to support the lifestyles of the aristocracy. Williams examines a variety of works, including "To Penshurst," a country house poem by Ben Jonson written in the 17th century that celebrates the owners' abundance and relaxed order by describing a country estate where everything happens effortlessly, which is not the real picture of the village (Remien & Slovic, 2022).

Many literary works show how the bourgeoisie controls the market and impacts workers' product value, demonstrating their conventional view of the proletariat as a tool. A worker is a production factor. No one respects him personally. Thus, capitalists use his destitution to profit themselves. Communism is the only way to end this awful disgrace, which the working class must fight for (Rumsey et al., 2008).

7.3 New Criticism

New Criticism is a literary philosophy that emphasizes the meticulous examination and interpretation of the text alone without taking into account other influences. Although this theory may not directly influence the comprehension of literary texts for ESL learners, it can nonetheless be advantageous in several respects: Textual analysis, specifically New Criticism, prioritizes meticulous examination and close reading of the language, structure, and symbolism included in a literary text. ESL learners can utilize this method to analyze the intricacies and subtleties of the language, thereby enhancing their understanding of the text's significance (Bennett & Royle, 2023).

New Criticism promotes a literary analysis approach that disregards extrinsic elements, such as historical context or the author's objectives, and emphasizes the exclusive reliance on the textual content. This technique can be advantageous for ESL learners as it allows them to concentrate on the literal words included in the text, minimizing any potential misunderstanding arising from cultural or historical allusions (Ferienda, 2017; Haines-Eitzen, 2015; Shaikh, 2016).

Interacting with Elaborate Texts: Literary texts frequently encompass intricate themes, symbolism, or multi-dimensional interpretations. ESL learners can systematically engage with these challenges by utilizing new criticism. By deconstructing the text into smaller elements, discerning patterns, and attaining a more lucid comprehension of the overarching message.

After World War I, a new school of Anglo-American literary criticism emerged, known as New Criticism, which argued for art's intrinsic worth by focusing on each work as a separate entity with its own unique significance. It stood in sharp contrast to the common critical method of employing biographical and contextual information to better understand a piece of writing. Lynn and Steven (2001, cited by Bennett & Royle, 2023) argued that the New Criticism was saddled with yet another distinguishing trait due to the extraordinary allure of literary language. The text stood on its own, so to speak. Rather than looking outside of the text for clues to its meaning, a reader should concentrate on the language system at work within it (Bennett & Royle, 2023).

The New Critics believed poetry was a unique type of speech that could transmit emotion, thought, and belief better than other languages. Though qualitatively different from science and philosophy, it conveyed real meaning. Such critics use close reading to define and formalize poetic thought and language, focusing on the connotative and associative values of words and sentences and the diverse functions of figurative language like symbol, metaphor, and image in literary works. The poem's "meaning" is the experience of reading and feeling its words, including its unsolved conflicts, ambiguity, and thematic presentation, which help ESL learners analyze the text and better study in the given time (Ferianda, 2017; Haines-Eitzen, 2015; Shaikh, 2016).

The New Critics held that every work produced a definitive and close reading (Ferianda, 2017; Haines-Eitzen, 2015; Shaikh, 2016). They look for literary components like imagery, metaphor, symbolism, story, character, rhyme, and meter.

7.4 Postcolonial theory

Critically analyzing the complex interactions between superior European nations and the inferior societies or nations they colonized, including identity crises involving gender, race, religion, class, language, exemplification, and history (Gandhi, 2018), postcolonial theory is a theoretical method for examining literature from colonial countries, especially via western or European advanced nations like Britain, France, and Spain. Languages, cultures, societies, and ways of life were altered or eradicated as a result of colonial rule. Post-colonialists were able to recover them. Hybridity, or the mingling of characteristics between the colonizer and the colonized, has been a central theme in colonial language, discourse, and cultural institutions. A few authors claim that Palestinian American cultural critic Edward's book *Orientalism* served as the catalyst for the postcolonial movement (Roy, 2016; Sinha & Varma, 2017; Kayira, 2015; Loomba et al., 2020). Teachers of English as a Second Language (ESL) can benefit from postcolonial theory in their classrooms by helping their students analyze and evaluate the portrayal of dominant and subordinate cultures in literature, both Eurocentric and postcolonial.

Although "postcolonial theory" has been the subject of considerable debate, its central tenet remains unchanged: colonialism is still very much alive and well. A major theme is the persistence of colonial control even after the fall of the Empire. Some postcolonial philosophies openly look forward to a world without colonialism. Well-known sources (Roy, 2016; Sinha & Varma, 2017; Kayira, 2015; Loomba et al., 2020) all agree that postcolonial theory has its origins in anticolonial thought from South Asia and Africa at the turn of the 20th century, is inextricably linked to colonial rule in the first half of the century, and is currently committed to politics and justice.

In an endeavor that remains dedicated to postcolonial theory, it has influenced how we read texts, how we comprehend national and international history and culture, and the political

judgments of scholars. Postcolonial theory continues to be an important kind of critical humanistic questioning in academia and beyond (Roy, 2016; Sinha & Varma, 2017; Kayira, 2015; Loomba et al., 2020), despite criticism from both inside and beyond the field.

7.4.1 Postcolonial literary study

Postcolonial literary critique supports colonizer and colonized authors' depictions of colonized peoples and their experiences as colonial subjects (Dolan, 2018). The colonial and postcolonial genres present in Dutch, Indies, and Indian literature provide a critical analysis of postcolonial identity and culture formed by the diaspora of Indo-European peoples, Eurasian literature from Indonesia, and the works of eminent authors who claim that the colonists treat their subjects inhumanely. Some privileged colonized people, especially subaltern peoples of the British Empire, were sent to attend universities and other institutions in the colonizer's nation, as stated by Zarycki and Tomasz (2014), in order to extend and promote colonial authority. They were born in the colony, but through education and exposure to European culture, they came to embody the colonial elite. After gaining independence, colonists and colonized are portrayed as archetypes in literature, and postcolonial criticisms of empire and colonialism were initiated through subjugated bicultural education. After the fall of the Soviet Union in 1991, many writers and critics focused their attention on the remaining Soviet socialist republics and the cultural, social, and economic Russification they had been subjected to in order to serve Greater Russia.

Literary studies of postcolonial countries and those pretending to be postcolonial provide two distinct types of postcolonial literature studies. Indian Novels in English: A Sociolinguistic Analysis explores the colonial influences on literature via the lens of postcolonial sociolinguistics (Hamadi, 2014). Characters who are pugnacious with their identities and have recognition crises during colonization are common in African, Middle Eastern, Indian subcontinent, and Asian literature. Britain colonized India from the 1700s until 1947, when it attained independence. India and its book characters clearly experienced the economic, political, and emotional impacts and stress of British rule, which ended with freedom. Any colonial nation's literature is like this. The literature from these techniques often addresses emotional, political, and economic issues (Childs, 2019; Fallon, 2016).

7.4.2 Application in Literature

Post-colonial theorists' study and interpret these writings from a distinct critical perspective. Post-colonial theory, or post-colonialism, requires the reader to evaluate, explain, and discover the different consequences of colonization and imperialism on locals and how power expansion over other nations changes individuals and nations. Effects of colonization post colonialism requires readers to view texts post-colonially. The chart will show us how to read a text post-colonially. The storyline, setting, and characters' actions should show how colonialism affects the story. This idea will help students understand colonized people's oppression and life changes. Colonizers exploited them. Moral and ethical disputes between organizations. Foreigners' aggression and challenge to native customs Naturally, the ruling elite will control fate and own all resources. Violence and prejudice at every level will eliminate this tyrannical nature (Roy, 2016; Sinha & Varma, 2017; Kayira, 2015; Loomba et al., 2020).

7.5 Historical Criticism

Historical criticism applies this approach to a text with specific historical knowledge about the author's time. History here means the social, political, economic, cultural, and intellectual climate. William Faulkner authored several of his novels and novellas during and after World War II, which helped explain his themes of gloom, defeat, and struggle. Dennis Walder (2004, cited by Crawford, 2019; Wimsatt Jr. & Brooks, 2022). Historical criticism has been applied to religious

and secular writing from many countries and eras. Historical criticism seeks to determine the text's original meaning in its historical context and literal sense (Atkins, 2021; Crawford, 2019; Wimsatt Jr. & Brooks, 2022).

ESL learners can benefit immensely from historical criticism, as it offers a contextual framework that helps with interpreting and analyzing literature. Historical criticism provides ESL learners with a deeper understanding of the cultural, social, and historical context in which a book is situated. Through comprehending the historical backdrop in which a composition was crafted, learners can acquire profound awareness of the author's objectives and the dominant ideologies and principles of that particular era (Ahern, 2018; Reid, 2020; Bentley, 2017; Barry, 2020).

Language Evolution: Over time, language undergoes changes, and those learning English as a second language frequently come across antiquated vocabulary, idiomatic expressions, or allusions in written materials. Historical criticism facilitates their comprehension of language subtleties, allowing them to reconcile the disparities in the meanings of words or phrases between the past and present. This comprehension amplifies their overall grasp of the content (Atkins, 2021; Crawford, 2019; Wimsatt Jr. & Brooks, 2022).

Margaret's description of a guy "of no profession" in Jane Austen's *Sense and Sensibility* has a different meaning now. While Austen lived in England, a man without a job was a gentleman and wealthy. The information also helps the reader spot gender-related motifs throughout the text. Literary works are natural products of distinct historical moments, infused with their ideals and events. Conversely, influential literature may efficiently influence readers' thoughts and behaviors. Analyzing a literary work's time period and viewpoint is crucial. George Orwell's *Nineteen Eighty-Four* shows how historical events, morals, politics, and circumstances shaped its inferential and evaluative level (Ahern, 2018; Reid, 2020; Bentley, 2017; Barry, 2020). Patai, Daphne (2005, cited by Turner, 2017) stated that the secondary purpose is to rebuild the author's and receivers' historical context. That can be done by reconstructing the text's events.

7.6 Psychoanalytic criticism

Cohen (2016) claimed Psychoanalytic criticism explains literature using psychoanalysis and psychological theories. Modern psychology has greatly influenced literature and literary criticism. Sigmund Freud's psychoanalytic ideas on desire fulfillment, sexuality, the subconscious, and repression changed the philosophy of human manners (May, 2018; Qizi, 2022; Tambling, 2018). Freud also showed how language and symbols may reflect the subconscious and repression. Freud said that the literature of Sophocles, Shakespeare, Goethe, and Dostoevsky was as important to his ideas as clinical study. Literary critiques like Freud's psychoanalytic analysis of Sophocles' *King Oedipus* proved compelling (May, 2018; Qizi, 2022; Tambling, 2018).

Psychoanalytic criticism, a literary theory established by Sigmund Freud, can assist ESL (English as a Second Language) learners in comprehending and analyzing material with greater proficiency, hence promoting their academic progress. Here is the method: Psychoanalytic criticism goes beyond surface-level interpretations of a work to examine the subconscious motivations and wants of characters. ESL learners can derive advantages from this strategy by acquiring a profound understanding of the underlying layers of a text's significance, which can boost their comprehension and interpretation (May, 2018; Qizi, 2022; Tambling, 2018).

Examining characters and their motivations: Freud's theory highlights the significance of the unconscious mind in influencing human behavior. Psychoanalytic critique enables ESL learners to examine the psychological aspects of characters, including their intentions, conflicts, and personality features. Developing a psychological understanding might enhance one's capacity to connect with characters and their progression in a written work. Psychoanalytic critique examines symbols and metaphors as manifestations of hidden drives and emotions. Through the

implementation of this method, English as a Second Language (ESL) learners can acquire a comprehensive understanding of the symbolic importance of different components in a written work, consequently gaining an in-depth awareness of its underlying themes and messages (May, 2018; Qizi, 2022; Tambling, 2018).

Promoting introspection and establishing associations: This method encourages readers to establish links between the text and their individual encounters, aspirations, and dilemmas. ESL learners have the ability to introspect and connect the material to their personal experiences, which can enhance their cognitive and emotional growth (May, 2018; Qizi, 2022; Tambling, 2018).

7.7 The benefits of studying literary theory as a helping tool in the ESL classroom to analyze the text with critical and elaborate information for the betterment of the ESL learners' study

ESL students who master theory will be able to perform the following study: contesting societal norms on distinctions between people, especially those concerning gender, age, sexual orientation, race, ethnicity, and nationality. Overturn social structures and redefine human differences as a result of power dynamics, cultural practices, and economics rather than knowledge-based, physiological, or other intrinsic limitations. determining how historical literature created literary genres and established social and cultural power by relying on injustices. supporting resistance literature that effectively aligns literature with political justice and cultural truth by providing a platform for a range of cultural viewpoints (May, 2018; Qizi, 2022; Tambling, 2018).

Firstly, there is admiration for different cultures; writing has always reflected its period and location. Literary theory may help ESL students understand how culture and society shape literature. This information will help them adjust to other cultures. Secondly, studying literature, from short stories to epic poems and novels, has shaped the English language. ESL students can enhance their reading comprehension, vocabulary, and analysis by reading and analyzing these works. Literary theory exposes pupils to many writing styles and literary tactics, improving their language skills. Thirdly, literary theory develops critical thinking and comprehension. Literary theory encourages ESL students to examine and analyze their readings. This type of assessment enhances their minds and prepares students to critically analyze many disciplines, not just literature. Fourthly, better writing: ESL students can enhance their writing by understanding literary devices, story frameworks, and stylistic elements. Students who study literary theory learn more about stories and communication, which enhances their writing. Fifthly, Success in Other Academic and Professional Fields Literary theory is useful outside of literary studies. Literary theory may assist ESL students in developing critical thinking, analysis, and language skills needed for academic writing, research, and creative problem solving. Literary theory literacy lets ESL students contribute to academic and professional debate (De Block & Kelly, 2022).

By offering extensive knowledge and analytical frameworks, literary theory aids ESL students in their analysis of texts. It gives students the chance to investigate other viewpoints, including feminism, postcolonialism, or structuralism, which can help them better grasp the themes, meanings, and cultural contexts of the book. Students who study literary theory are better equipped to think critically, recognize underlying ideologies, and evaluate literary works in more complex ways. Overall, by providing a variety of perspectives through which students may evaluate and debate literature, it improves the reading experience (May, 2018; Qizi, 2022; Tambling, 2018). With this information and findings, it is positively supporting the first objective and fulfilling the first objective.

The framework and underlying information that literary theory offers can help with the study and comprehension of literature. It provides a variety of methods, viewpoints, and analytical tools for analyzing and interpreting literary works. Learners of ESL can get a greater

understanding of writers' intentions, texts' meanings, and the larger cultural, historical, and social settings in which they were created by studying various literary theories. Literary theory supports a more thorough and critical examination by bringing to light hidden themes, symbols, and meanings in literature. From the critical analysis and discussion, the second objective was proven precisely. Studying literary theory is beneficial for ESL students because it encourages growth in many areas beyond linguistic competence, including cultural awareness, analytical reasoning, and the ability to put thoughts into writing. Thus, two objectives are fulfilled.

8.0 The limitations, scope, importance, and recommendations for conducting further studies on utilizing literary theories in ESL classrooms

The information in this article was compiled from previously published books, articles, theses, periodicals, and newspapers. The data sources are secondary. Access to primary data is lacking in secondary research articles, limiting researchers' ability to replicate findings and conduct additional analysis. The data are based on particular contexts and may not be applicable to other cultures or communities, with the exception of English language learners.

The scope of the study begins with an examination of literary theories such as Marxism, feminism, and postcolonialism. These literature and language exercises are beneficial for ESL classrooms. Secondly, language development: literary theories help ESL students read, write, listen, and engage in conversation. Thirdly, cultural appreciation: literary theories can help ESL students understand and appreciate other cultures, making the classroom more diverse. Fourthly, critical thinking: literary theories encourage text analysis and evaluation. Using them in ESL lessons improves critical thinking and analysis.

The Implications of the Study: First, it helps students become better writers and readers by forcing them to work with sophisticated language and a wider range of words as they investigate literature via various literary theories. Second, ESL students are able to build higher-order thinking abilities through exposure to literary theories. These include the ability to analyze, synthesize, and evaluate texts. Third, there is cultural and literary enrichment for ESL students as they are introduced to new literary genres, authors, and cultures through the study of literary theory. Inspiring originality in students' written and spoken replies, literary theories provide pupils with room to explore many readings of a text and formulate their own opinions about it.

This paper can be taken as motivation for future research. Future researchers can go through various fields, such as comparative research, to look at how well different literary theories work in ESL classes and how well they address the linguistic and cultural demands of different ESL student populations. Moreover, longitudinal studies: Study the effects of incorporating literary ideas into ESL courses on students' linguistic competence, critical thinking abilities, and cultural awareness over the course of many years. Additionally, research how well ESL teacher training programs prepare instructors to execute literature-based language education by examining how literary theories are included in the process. Consider issues including student preferences, cultural backgrounds, and language competence levels as teachers explore the impact of literary theories on boosting motivation and engagement in ESL classes.

Overall, further study on utilizing literary theories in ESL classrooms can contribute to the effective integration of literature into language instruction, fostering language development, critical thinking, cultural appreciation, and general learner engagement.

9.0 Conclusion

It is undoubtedly naive to suppose that people are all endowed with some higher sensitivity that can automatically differentiate which writers are great and which are average, as Habib Rafey argued in *Literary Theory from Antiquity to the Present: An Introduction* (2011). Even the

pronunciation of Homer's ancient Greek is unknown to modern people. Without a critical apparatus, without a legacy of critical experience and interpretation, how could man ever arrive at any estimate of these writers, their backgrounds, or their contributions? There is little doubt that students may benefit from a broader perspective and enhanced knowledge of literary works by studying literary theory. The teacher's role is to carefully choose appropriate materials and patiently direct the students through the lessons (Ferianda, 2017; Haines-Eitzen, 2015; Shaikh, 2016). Rumsey et al. (2008) said applying critical theory in the undergraduate ESL literature classroom may play an important role in well-planned teaching tactics.

The use of literary theory as a teaching tool is founded on the tenets of critical thinking, hands-on experience, and social-cognitive development. These pedagogies advocate for teaching methods that include group discussion, sharing of individual experiences, application of knowledge to real-world problems, questioning of accepted dogma, the development of novel explanations and approaches, the generation of original ideas, and collaborative effort (Beach et al., 2016; Naji et al., 2019; Regmi, 2021). In addition to preparing students to create their own unique interpretations of literary works by drawing on their own experiences and worldviews, literary theory as outlined in this paper also promotes and trains them to do so. Since it draws from a variety of fields, it helps students develop into well-rounded critical thinkers and problem solvers. As it imparts essential knowledge to ESL pupils, the educator takes on the role of promoter of dialogue and inquiry in the classroom. ESL students gain independence when they assume responsibility for their own education and interpretation of the world around them. Therefore, combining the teaching of literature with literary theory may serve the main objectives of progressive contemporary education (Gabriel et al., 2022; Boyle, 2023; De Santis, 2023).

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Empowering Students of Vocational Agricultural Education through Entrepreneurship in Edible Insect Production in Nigeria

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Abstract

In the 21st century where youths' idleness is high, critical thinking towards empowering the next generation of Students through entrepreneurship in edible insect production is vital. Empowerment in developing students is a way of describing, stimulating, and killing barriers that may hinder them from self-actualizing. Therefore, this concept paper aims to explain entrepreneurship in insect domestication, feed preparation, processing, and marketing. Making the processes of entrepreneurship to improve students' skills and access funds for enhancing their quality, dignity, and work in the society they live, and encouraging students to spot business opportunities in edible insect production to help them make money and escape poverty, among others, are the study implications stressed. Among the future works suggested, is the need to identify competencies required for raising, processing, distributing, and marketing edible insects. It was concluded that entrepreneurship opportunities in edible insect production in Nigeria are small, and drumming these opportunities is critical to empowering and lifting many VAESs out of poverty.

Keywords: *edible insect, empowerment, entrepreneurship, marketing, production*

1.0 Introduction

Empowering the next generation of learners takes the step of creating a social environment where such learners can make decisions/choices either individually or collectively for social transformation. This process strengthens the inherent abilities by obtaining knowledge, power, and experience (Dadona, 2015). To generate gainful knowledge, power, and experience for the next generation of learners, information about a phenomenon like entrepreneurship in edible insect production (EEIP) needs thorough synthesizes. EEIP encompasses skill and willingness to advance, establish, and run a business enterprise and any of its uncertainties to make a profit (Victor et al., 2020). EEIP in termites, crickets, grasshoppers, palm weevils, silkworms, mealworms, and super-worms are the most projecting new business initiatives for the next generation of students in the direction of its domestication, feed preparation, processing, and marketing.

The current challenges posed by climate change discourage the overdependence on conventional protein sources from macro-livestock. Hence, the future for self-reliance of Vocational Agricultural Education students (VAESs) lies in EEIP because many tend to shift to protein sources derived from edible insects. Students' entrepreneurship engagements in edible insect production are critical thinking and problem-solving ways of empowering youths (Joy et al., 2022). Therefore, this concept paper aims to explain and expose the next generation of VAESs

to entrepreneurship engagements in edible insect production.

2.0 Entrepreneurship Concepts in Edible Insect Production

2.1 Insect domestication

Insect domestication business is the orderly way of taming insects in cages from either wild or existing farms. The entrepreneurship idea in this regard is culturing and mass-producing desirable insects based on the community recommendation to meet the market demand (Ojonugwa et al., 2022). Great economic opportunities exist for entrepreneurs from the period of rearing to disposal. Spotting business opportunities in collecting insect meat, frass, and manure, designing and constructing cages, rearing larvae, pupa, and adult insects for market sales, and rendering other services in insect farms are entrepreneurship prospects in edible insect production (EIP).

2.2 Insect feed preparation

Edible insects (EI) are called omnivorous mini-livestock, given their feeding habit. They feed on all feed sources such as mixed organic wastes, food wastes from public places, industrial food wastes, and commercial animal feed (Nyakeri et al., 2019). The business opportunities in insect feed preparation are directly collecting and converting organic wastes, such as decaying plant and animal materials, into feeds (Dorte et al., 2021). Other adventures of entrepreneurship in insect feed preparation is the collection and sales of pawpaw leaves, sweet potato leaves, cocoyam leaves, fluted pumpkin leaves, spinach, sweet pea, tomatoes, yam peels, cassava peels, pieces of bread, rotten plantains, mulberry leaves substrates, palm tree trunks, and palm fiber, and remnant foods without table salt for insect consumption.

2.3 Insect processing

EI processing is a deliberate act of changing the ill appearance of insects into a more admirable form for consumption by roasting or dehydrating the whole insect and crushing/grinding it into flour (Liceaga, 2021). Processing EI into flour and powders is an emerging enterprise opportunity. The flour forms ingredients such as protein, lipids, and chitin that are nutritious in human diets and feed for livestock (Dorte et al., 2021). Enterprising with the insect flour is converting it into biscuits, bread, pasta, bubbles, savory crackers, and caca pigeon snack production. Perceiving and participating in using mechanical oil press to extract EI oil, and converting frass or insect manure into biofertilizers are other entrepreneurial engagements in EI processing.

2.4 Insect marketing

is an action, a set of associations, and those processes for creating, communicating, delivering, and exchanging goods that have value for customers (Lovemore et al., 2019). The marketing actors include wholesalers, middlemen, retailers, and final consumers. These actors market cooked/fried insects, eggs, dried and crushed insect flour, insect bubbles, insect snacks, insect-based biscuits, etc. Wholesalers are those business actors who stand between the producers and the retailers or consumers (Ojonugwa et al., 2021). The wholesalers meet producers of insects at the production site to purchase and sell to insect retailers or consumers. The entrepreneurship empowerment here encourages individuals to act as EI retailers/vendors/traders who can buy insects from producers or wholesalers and sell directly to final consumers in restaurants, shops, streets, parties, hotels, and bars.

3.0 Implications

- VAESs embarking on small businesses, scalable startups, large companies, or social entrepreneurship in EI farming assures the public of alternative protein sources for food and feeds.
- VAESs tapping into the entrepreneurship dimension of marketing blanched insects, refrigerated insects, fermented insects in the form of sauces, packed snacks, and cocoons for export stimulate their financial empowerment.
- VAESs coordinating the processes in processing insect feeds, eggs, larvae, and other inputs for profitable insect farming would widen insect production in Nigeria.
- Encouraging VAESs to spot business opportunities in insect farming, insect feed preparation, edible insect processing, and insect marketing would help them make money to actualize their dreams of escaping poverty
- The process of empowering the VAESs will improve their skills and access to funds and enhance their quality, dignity, and work in the society they live in.

4.0 Future Work

- Further research could be conducted on competencies required for raising edible insect, processing, distribution, and marketing.
- Research competencies required by students in maintaining a healthy population of insects.
- Research is required on identifying local species suitable for rearing, ideal conditions for production, and techniques of disease management of insects.

5.0 Conclusion

There are few entrepreneurship opportunities in Nigeria, and drumming these opportunities is critical to empowering and lifting many VAESs out of poverty. If the insect entrepreneurship processes of EI domestication, feed preparation, processing, and marketing are practically incorporated, it can improve people's living standards, including the VAESs.

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Sorotan Literatur Bersistematik Tentang Penggunaan Teknologi Digital dalam Pendidikan Matematik: Cabaran Masa Depan Untuk Amalan Pendidikan dan Penyelidikan Murid Pintar Cerdas.

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Abstrak

Kajian literatur bersistematik ini mengkaji perkembangan penggunaan teknologi digital dalam pendidikan matematik dan kesannya terhadap pembelajaran murid pintar cerdas. Kajian itu menganalisis 25 artikel yang diterbitkan antara Januari 2019 dan Oktober 2023 daripada pangkalan data Scopus dan ERIC untuk menjawab persoalan kajian. Majoriti kajian tertumpu kepada penggunaan teknologi digital dan mengenal pasti faktor yang menghalang pembangunan teknologi digital dalam kalangan guru matematik, termasuk efikasi sendiri, keyakinan, penentangan terhadap perubahan, kekurangan sokongan institusi, dan sumber yang tidak mencukupi. Kajian mengesyorkan penyertaan aktif dalam latihan teknologi pedagogi untuk guru dan bakal guru untuk menambah baik pengajaran matematik. Walaupun penggunaan teknologi digital dalam pengajaran dan pembelajaran menawarkan banyak faedah, ia juga memberikan cabaran untuk mengintegrasikan teknologi secara berkesan ke dalam pengajaran matematik dan meningkatkan pembangunan teknologi digital dalam kalangan guru matematik dan murid pintar cerdas. Masa depan pendidikan memberi tumpuan kepada teknologi digital, dan mod pendidikan tradisional akan diganti sepenuhnya dengan pembelajaran digital, buku teks digital dan sumber digital dalam kalangan murid dan guru. Kelebihan utama teknologi digital mungkin untuk memberi tugas lanjutan yang fleksibiliti dan autonomi kepada murid, dan menggalakkan pembelajaran sendiri bagi murid pintar cerdas.

Kata kunci: teknologi digital; pendidikan matematik; pintar cerdas

1.0 Pengenalan

Dalam era Revolusi Industri 4.0 (4IR), perkembangan teknologi digital telah membawa perubahan dan mempengaruhi kehidupan. Setiap individu perlu berupaya menerima guna dan mengintegrasikan teknologi digital dalam kehidupan seharian (Unit Perancang Ekonomi Jabatan Perdana Menteri, 2021). Penggunaan teknologi seiring dengan kehendak negara untuk menyediakan pengetahuan dan kemahiran STEM bagi menghadapi cabaran 4IR. Penggunaan teknologi dalam pengajaran dapat menyumbang kepada pembelajaran yang berkesan dengan penglibatan murid secara aktif melalui pembelajaran berasaskan inkuiri-penemuan dan pembelajaran berasaskan penyelesaian masalah (Davis, 1989). Banyak kajian membuktikan bahawa transformasi digital dalam sistem pendidikan perlu dilaksanakan untuk menghasilkan lebih ramai bakat digital (Yang & Baldwin, 2020). Namun, salah satu ciri terpenting transformasi ini ialah penyediaan kandungan yang berkualiti dan khas yang sesuai untuk keperluan setiap orang, bukannya memindahkan kandungan yang sama kepada setiap individu, sama ada dalam ruang kelas fizikal atau maya.

Pedagogi abad ke-21 pula menekankan penggunaan media dan teknologi secara inovatif

untuk menyediakan murid dalam dunia yang sentiasa berubah dan dinamik. Dalam proses pengajaran dan pembelajaran (PdP) Matematik, murid mengalami masalah mengaitkan antara konsep abstrak yang sedang dipelajari dengan konsep yang telah dipelajari (Fitriani & Nurfauziah, 2020). Kajian terkini Nikolopoulou et al., (2022) yang menyiasat penggunaan teknologi mendapati bahawa keupayaan teknologi digital dapat menggalakkan pembelajaran dan penglibatan murid. Ini membuktikan bahawa murid dapat menggunakan teknologi digital untuk mengakses kandungan pelajaran dan menggunakan perisian untuk menyokong pembelajaran mereka. Namun beberapa kajian telah menunjukkan terdapat beberapa halangan dalam penggunaan teknologi digital dalam pembelajaran. Keyakinan, umur, kekangan masa, masalah teknikal dan kekurangan akses merupakan antara halangan utama (Nurfalah et al., 2021).

Berdasarkan latar belakang yang dinyatakan sebelum ini, kajian ini bertujuan untuk mendalami kefahaman tentang penyelidikan teknologi digital dalam kalangan murid pintar cerdas di sekolah menengah. Sorotan Literatur Bersistematik (SLR) telah digunakan bagi mengenal pasti jurang penyelidikan dalam sesuatu bidang pengajian dan membantu penyelidik meneroka lebih jauh bidang yang belum diterokai sebelum ini. Menurut Yuliandari et al., (2023), SLR ialah teknik untuk mengenal pasti penyelidikan terkini secara menyeluruh dan kolektif untuk mengkaji sesuatu bidang pengajian. Oleh itu, satu kajian literatur yang sistematik diperlukan untuk memahami trend penyelidikan terkini dan mengenal pasti model atau kerangka kerja, dan mengenal pasti cara untuk melaksanakan transformasi teknologi digital di sekolah menengah dalam kalangan murid pintar cerdas.

2.0 Objektif dan Persoalan kajian

Persoalan kajian untuk kajian ini telah digubal dalam melaksanakan kajian literatur

- 1) Apakah amalan teknologi digital terkini yang digunakan dalam pendidikan matematik sekolah menengah dan yang manakah antara teknologi ini paling berkesan untuk murid pintar cerdas?
- 2) Apakah yang menyokong pelaksanaan pembelajaran digital dalam kalangan murid pintar cerdas sekolah menengah?
- 3) Apakah model yang sesuai untuk murid pintar cerdas dan berapa banyak manfaat yang diharapkan pengguna daripada pendekatan ini?

3.0 Kaedah Kajian

Kajian ini menggunakan artikel yang diterbitkan dalam jangka masa kurang daripada lima tahun iaitu dari tahun 2019 hingga tahun 2023. Kajian ini telah menganalisis kajian terkini tentang teknologi digital dalam pendidikan matematik dalam pembelajaran murid pintar cerdas. Proses ini melalui empat peringkat pemilihan artikel dan dianalisis melalui kaedah *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA). Melalui kaedah PRISMA, artikel yang dikumpulkan telah melalui empat tahap iaitu, pengenalanpastian (*identification*), saringan (*screening*), kelayakan (*eligibility*) dan pemasukan (*inclusion*) (Mengist, Soromessa, & Legese, 2020).

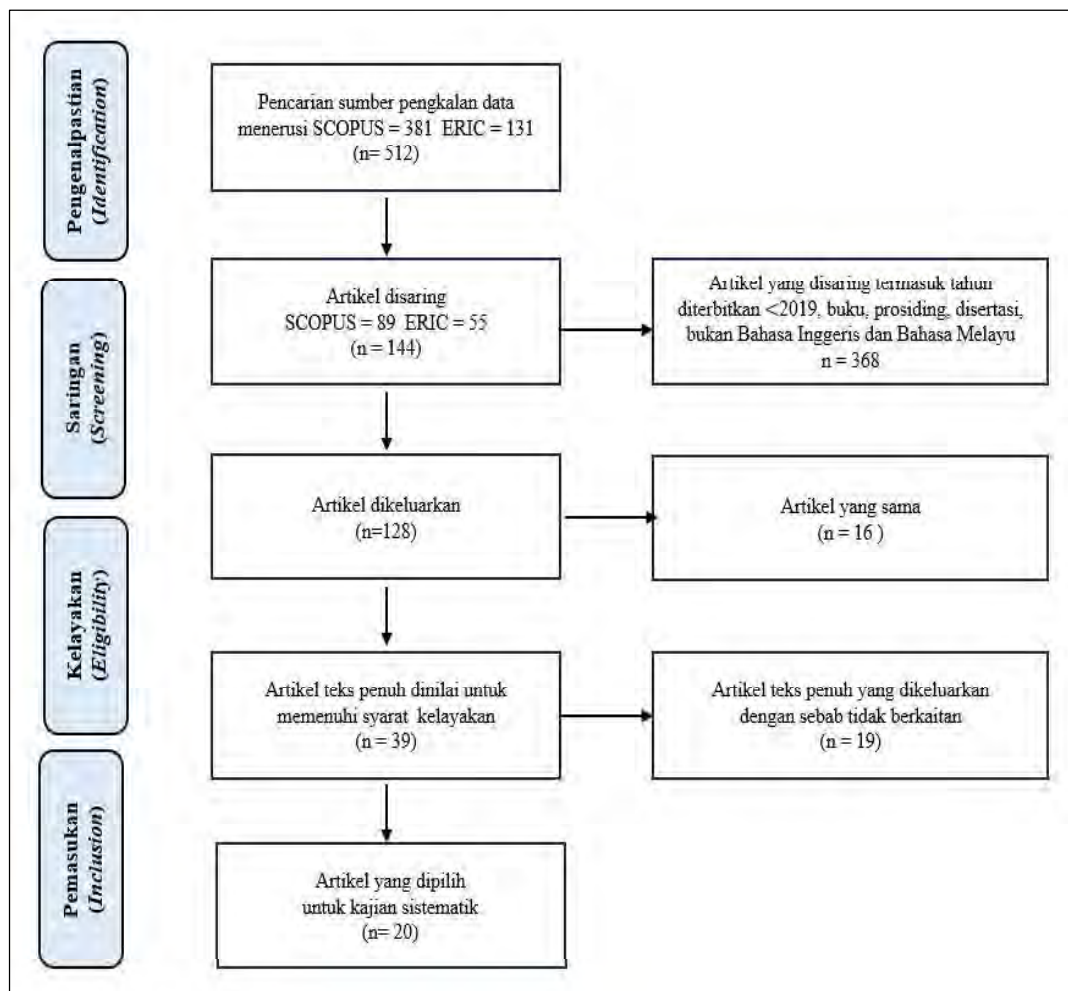
Pencarian artikel dijalankan dengan menggunakan dua pangkalan data elektronik iaitu *Scopus* dan *Education Resources Information Center (ERIC)*. Proses pencarian artikel yang berkaitan dengan objektif kajian menggunakan beberapa kata kunci utama dalam Bahasa Inggeris dan Bahasa Melayu sahaja. Kata kunci Bahasa Inggeris ialah “digital technology”, “mathematics”, dan “gifted and talented”. Manakala kata kunci alternatif dalam Bahasa Melayu adalah “teknologi digital”, “matematik”, dan “pintar cerdas”. Selain itu, bagi mendapatkan penemuan yang lebih meluas, perkataan ‘AND’ atau ‘OR’ diletakkan di antara kata kunci yang digunakan.

Menurut Mengist et al. (2020), artikel-artikel yang melalui analisis PRISMA ternyata lebih

bermutu dan mampu menunjukkan jurang yang boleh dikaji. Artikel-artikel yang dikenal pasti akan dinilai dan dianalisis secara kritis dan menyeluruh untuk memberi jawapan kepada persoalan kajian dengan tepat. Hasil daripada penelitian akan memberi justifikasi yang kukuh tentang teknologi digital dalam pendidikan matematik dalam kalangan murid pintar cerdas.

4.0 Peringkat Analisis PRISMA

Proses pencarian dari pangkalan data elektronik Scopus dan ERIC telah menemukan sebanyak 512 buah artikel, iaitu 381 buah artikel dari Scopus dan 131 buah artikel dari ERIC. Seterusnya proses saringan telah dilakukan dengan menolak artikel yang tidak menepati kriteria yang ditetapkan seperti artikel yang diterbitkan sebelum 2019, disertasi, tesis, SLR, Bahasa yang bukan Bahasa Inggeris dan Bahasa Melayu. Setelah melalui pembacaan 39 buah artikel secara mendalam, sebanyak 19 buah artikel telah diketepikan. Akhirnya sebanyak 20 buah artikel yang berkaitan dengan teknologi digital dalam pendidikan matematik dalam kalangan murid pintar cerdas telah dipilih sebagai asas kajian sorotan literatur bersistematik ini. Rajah 1 menunjukkan proses analisis artikel melalui kaedah PRISMA.



Rajah 1: Proses pemilihan artikel melalui PRISMA (Sumber: Mengist et al., (2020))

Seterusnya, Jadual 1 menunjukkan senarai 20 artikel yang menepati kriteria.

Jadual 1. Senarai artikel teknologi digital dalam pendidikan matematik dalam kalangan murid pintar cerdas

Penulis	Tahun	Tajuk Artikel
Eirini Zoi Kontostavlou, & Anna Maria Driga	2023	<i>Digital technologies for Gifted Students' Education</i>
Gönültaş, A., Avcu, Y. E., Taşdelen, A. S., & Hünerli, S.	2023	<i>Examination of the Relationship Between Digital Literacy and Cyberloafing Levels of Gifted Students.</i>
Molina-Toro, J. F.	2023	<i>From task implementation to task reorganization through technology: A case study with an in-service mathematics teacher.</i>
Alqahtani, R., & Alqahtani, M. A.	2023	<i>Heterogeneity across Australian ICT policies for education of gifted students</i>
Yunxian Guo, Wang, Y., & Ortega-martín, J. L.	2023	<i>The Impact of Blended Learning-based Scaffolding Techniques on Learners' Self-Efficacy and Willingness to Communicate.</i>
Vildan, B., & Salih, Ç.	2022	<i>A Thematic Content Analysis of Gifted and Talented Students in Science Education in Türkiye.</i>
Aiym, Y., Galiya, K., Ademi, B., Meirambek, A., Kamshat, Z., & Gulmira, K.	2022	<i>Development of the logical thinking of future mathematics teachers through the use of digital educational technologies</i>
Yaman, Y., & Taşdelen, A. S.	2022	<i>Digital Storytelling Overview : The Benefits of Digital Storytelling in Gifted Education.</i>
Haleem, A., Javaid, M., Qadri, M. A., & Suman, R.	2022	<i>Understanding the role of digital technologies in education: A review.</i>
Eng Ling, O., & Kutty, F. M.	2022	Peranan Efikasi Kendiri dan Kemahiran Teknologi Digital Guru Sekolah Rendah dalam Memotivasikan Pembelajaran Murid
Ronksley-pavia, M., & Neumann, M. M.	2022	<i>Exploring Educator Leadership Practices in Gifted Education to Facilitate Online Learning Experiences for (Re)Engaging Gifted Students.</i>
Weinhandl, R., Houghton, T., Lindenbauer, E., Mayerhofer, M., Lavicza, Z., & Hohenwarter, M.	2021	<i>Integrating Technologies Into Teaching and Learning Mathematics at the Beginning of Secondary Education in Austria.</i>
Nor Intan Adha Hafit, Azilah Anis, Nur Lyana Syamimie	2021	<i>The Relationship Between Internet Self-Efficacy, Self-Directed Learning, and Motivation for Learning towards Technology Acceptance in Digital Learning among</i>

Shuhaime, & Md Murad Miah.		<i>Indigenous Society in Malaysia.</i>
Nurfalah, E., Yuliasuti, R., Rahayu, P., Sulistyaningrum, H., & Surawan	2021	<i>Assessing the effectiveness of using digital mathematics technology on student mathematics learning</i>
Yang, D., & Baldwin, S. J.	2020	<i>Using technology to support student learning in an integrated STEM learning environment.</i>
Hillmayr, D., Ziernwald, L., Reinhold, F., Hofer, S. I., & Reiss, K. M.	2020	<i>The potential of digital tools to enhance mathematics and science learning in secondary schools: A context-specific meta-analysis.</i>
Attard, C., & Holmes, K.	2020	<i>"It gives you that sense of hope": An exploration of technology use to mediate student engagement with mathematics</i>
N.Rahman, Z.Zolkifli, L. Y.	2020	Kepentingan Kemudahan Teknologi dan Motivasi Membentuk Kesedaran Pelajar dalam Pembelajaran Digital.
Zhou, D., Liu, J., & Liu, J.	2020	<i>The effect of problematic Internet use on mathematics achievement: The mediating role of self-efficacy and the moderating role of teacher-student relationships.</i>
Molina-Toro, J. F., Rendón-Mesa, P. A., & Villa-Ochoa, J. A.	2019	<i>Research trends in digital technologies and modeling in mathematics education</i>

5.0 Dapatkan dan Perbincangan

Hasil daripada sorotan literatur bersistematik menunjukkan bahawa teknologi digital dalam pendidikan matematik dalam kalangan murid pintar cerdas dapat memberikan beberapa manfaat, antaranya:

a) Pembelajaran yang lebih interaktif dan menarik.

Pembelajaran matematik menjadi lebih menarik dan interaktif. Hal ini boleh dilakukan dengan menggunakan pelbagai teknologi digital yang inovatif, seperti simulasi, animasi, dan permainan matematik. Penggunaan simulasi dan animasi dapat menerangkan konsep matematik yang abstrak. Contohnya, murid boleh menggunakan simulasi untuk memahami konsep geometri dan animasi bagi memahami konsep algebra. Penggunaan permainan matematik pula dapat meningkatkan pemahaman dan kemahiran murid. Contohnya, permainan matematik dapat membantu murid untuk meningkatkan kemahiran menyelesaikan masalah.

b) Pembelajaran yang lebih personal

Teknologi digital dapat membantu guru untuk memberikan pembelajaran peribadi kepada murid pintar cerdas. Hal ini dapat dilakukan dengan menggunakan modul pembelajaran matematik yang dapat disesuaikan dengan kemampuan dan minat murid

pintar cerdas.

c) Pembelajaran heutogogi

Teknologi digital dapat membantu murid pintar cerdas untuk belajar secara heutogogi. Ini boleh dilakukan dengan menyediakan pelbagai sumber pembelajaran yang mudah diakses oleh murid secara atas talian. Murid pintar cerdas dapat memanfaatkan sumber pembelajaran digital untuk mempelajari topik matematik yang belum diajarkan di sekolah, atau untuk latihan pengukuhan.

Namun, terdapat juga beberapa cabaran yang perlu dihadapi oleh murid pintar cerdas dalam penerapan teknologi digital dalam matematik, antaranya:

- a) Ketersediaan sarana dan prasarana. Untuk memanfaatkan teknologi digital dalam pembelajaran matematik, prasarana yang mencukupi, seperti komputer dan akses internet diperlukan.
- b) Keterampilan guru. Guru perlu mempunyai kemahiran dalam menggunakan teknologi digital untuk pembelajaran matematik.
- c) Efikasi teknologi digital murid. Murid perlu mempunyai kemahiran dalam menggunakan teknologi digital untuk pembelajaran matematik.

Untuk mengatasi masalah tersebut, sokongan daripada pelbagai pihak, seperti kementerian, sekolah, guru, dan murid amat diperlukan. Kementerian Pendidikan perlu menyediakan prasarana sekolah yang menyokong penerapan teknologi digital dalam pembelajaran matematik. Sekolah perlu menyediakan latihan bagi guru dalam menggunakan teknologi digital untuk pembelajaran matematik. Guru dan murid perlu meningkatkan kemahiran mereka dalam menggunakan teknologi digital untuk pembelajaran matematik.

6.0 Kesimpulan

Berdasarkan kepada sorotan literatur bersistematik ini didapati tidak banyak kajian yang memfokuskan kepada teknologi digital dalam kalangan murid pintar cerdas terutamanya bagi pendidikan matematik. Adalah penting untuk membangunkan model teknologi digital pendidikan matematik untuk murid pintar cerdas dengan mempertimbangkan proses secara holistik. Atas sebab ini, adalah disyorkan untuk memberi tumpuan kepada kajian eksperimen yang berbeza yang merangkumi reka bentuk pengajaran di mana terdapat hubungan antara kemahiran berfikir aras tinggi murid pintar cerdas seperti kreativiti, pemikiran analitikal, analisis-sintesis dan yang disokong oleh pelbagai aktiviti teknologi digital dalam pendidikan matematik.

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Kertas Konseptual Sokongan Sosial, Daya Tahan dan Tingkah Laku Mencederakan Diri Tanpa Niat Membunuh Diri (NSSI) dalam Kalangan Remaja

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Abstrak

Kesihatan mental merupakan salah satu elemen terpenting dalam kehidupan manusia. Statistik Tinjauan Kesihatan dan Morbiditi Kebangsaan 2019 telah mendedahkan bahawa seramai 424,000 remaja menghadapi masalah kesihatan mental di Malaysia. Masalah kesihatan mental yang sering diperkatakan dalam kajian penyelidikan adalah tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI). Masalah tingkah laku NSSI ini bersifat peribadi, banyak kes tidak dapat dikesan oleh pekerja kesihatan. Oleh itu, sokongan sosial dan daya tahan merupakan aspek penting yang perlu dimiliki oleh remaja masa kini. Hal ini demikian kerana kedua-dua pemboleh ubah ini boleh memberi kesan terhadap tingkah laku individu secara langsung ataupun tidak langsung. Kajian-kajian lepas menunjukkan bahawa terdapat hubungan negatif yang signifikan antara sokongan sosial dengan tingkah laku NSSI manakala, terdapat hubungan negatif yang signifikan antara daya tahan dengan tingkah laku NSSI. Sokongan sosial dan daya tahan boleh digunakan sebagai intervensi yang dapat membantu remaja yang terlibat dalam tingkah laku NSSI bagi mengurangkan atau memberhentikan tingkah laku NSSI.

Kata kunci: *tingkah laku mencederakan diri tanpa niat bunuh diri (NSSI), sokongan sosial, daya tahan*

1.0 Pengenalan

Kesihatan mental merupakan salah satu elemen terpenting dalam kehidupan manusia (Johari et al., 2022). Kesihatan mental merujuk kepada keadaan ketidakhadiran penyakit mental Pertubuhan Kesihatan Sedunia, 2019). Menurut Johari et al. (2022), masalah kesihatan mental yang dikaji dalam kajian-kajian penyelidikan adalah tingkah laku mencederakan diri tanpa niat membunuh diri (Non-Suicidal Self-Injury, NSSI). Tingkah laku NSSI ini merupakan tingkah laku merosakkan tisu badan sendiri dengan sengaja, namun tanpa berniat membunuh diri secara sedar bagi tujuan yang tidak dibenarkan secara sosial mahupun dalam lingkungan budaya (International Society for the Study of Self-Injury, 2018).

Laporan Statistik Tinjauan Kesihatan dan Morbiditi Kebangsaan (NHMS) pada tahun 2019 telah mendedahkan bahawa seramai 424,000 remaja menghadapi masalah kesihatan mental di Malaysia (Kementerian Kesihatan Malaysia, 2020). Kira-kira 4.2 juta remaja warganegara Malaysia berumur 16 hingga 19 tahun dilaporkan mengalami penyakit mental (Kamarulzaman & Jodi, 2018). Malahan, tingkah laku NSSI mempunyai kelaziman global yang tinggi, terutamanya yang berlaku dalam kalangan remaja, contohnya, kadar pengesanan tingkah laku NSSI dalam kalangan remaja di Amerika Syarikat adalah antara 13.0 hingga 46.5%, sedangkan kadar pengesanan dalam kalangan remaja di Kanada adalah 17.0%, 6.2% di Australia (Castellví et al., 2017) dan 27.4% di China (Azhu et al., 2017).

Di Malaysia, beberapa kajian telah membuktikan kehadiran tingkah laku NSSI dalam

konteks tempatan, khususnya dalam kalangan sampel bukan klinikal (Johari et al., 2022; Masiran et al., 2017).

Menurut Ganaprakasam et al. (2021) dan Guan & Aman (2015), seramai 56.81% remaja daripada 342 pelajar sekolah menengah di Pulau Pinang dilaporkan terlibat dalam tingkah laku mencederakan diri sendiri tanpa niat membunuh diri. Tingkah laku NSSI ini dilaporkan telah melibatkan 16.2% responden etnik India, 15% responden etnik Melayu, 11.6% responden etnik Cina, dan 28.9% responden daripada kumpulan etnik lain (Mohamad et al., 2021). Kajian Guan dan Aman (2015) terhadap golongan remaja berusia 13 hingga 16 tahun menunjukkan bahawa etnik Cina-Malaysia mempunyai kelaziman tingkah laku NSSI yang tinggi, iaitu antara 56.8-68.0%.

Hakikatnya, masalah tingkah laku NSSI ini bersifat peribadi di mana begitu banyak kes tidak dapat dikesan oleh pekerja kesihatan, kecuali remaja yang terlibat mendapatkan bantuan rawatan atau pencegahan daripada psikiatri (Sivasankari et al., 2016; Tarigan & Apsari, 2021). Oleh yang demikian, berdasarkan kajian-kajian lepas, sokongan sosial dan daya tahan merupakan antara aspek penting yang perlu dimiliki oleh remaja masa kini kerana sokongan sosial dan daya tahan dapat memberi kesan pada tingkah laku individu secara langsung ataupun tidak langsung (Yuan et al., 2023). Sokongan sosial, merujuk kepada keadaan seseorang yang disayangi, dihargai, dan disokong pada masa yang diperlukan oleh ahli rangkaian sosial mereka (Kellerman et al., 2022) manakala daya tahan merupakan kekuatan dalaman seseorang yang merangkumi banyak aspek diri, termasuk aspek emosi, rohani, kognitif, dan fizikal (Khalid, 2021). Sokongan sosial dan daya tahan mempunyai hubung kait dengan tingkah laku NSSI dalam kalangan remaja (Yuan et al., 2023).

Secara ringkasnya, jelas menunjukkan bahawa kesihatan mental remaja pada masa kini sangat membimbangkan semua pihak. Memandangkan tingkah laku NSSI yang semakin tinggi dalam kalangan remaja dan pengaruh negatif yang dibawanya terhadap remaja, maka adalah perlu untuk menjalankan kajian mendalam berkaitan dengan tingkah laku NSSI dalam kalangan remaja (Yuan et al., 2023).

2.0 Tinjauan Literatur

Tingkah Laku Mencederakan Diri Tanpa Niat Membunuh Diri (NSSI)

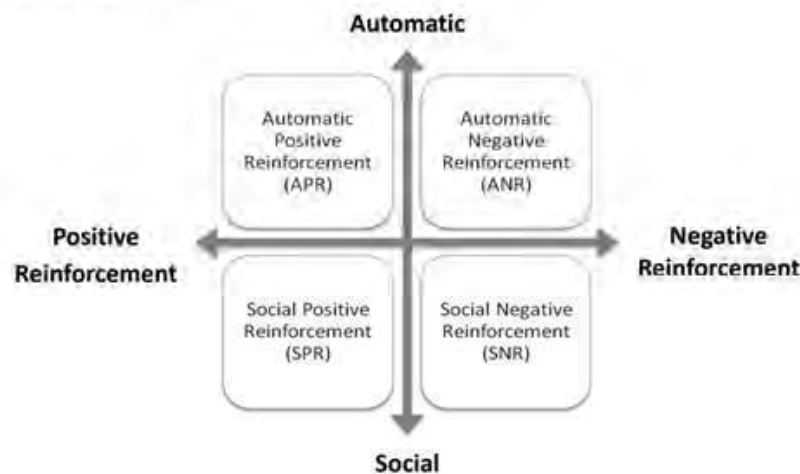
Tingkah laku NSSI ditakrifkan sebagai kecederaan yang disengajakan kepada tubuh seseorang tanpa keinginan untuk menyebabkan kematian (Lauw et al., 2015). Mencederakan diri sendiri juga dikenali sebagai pencacatan diri (*self-mutilation*) atau penderaan diri (*self-abuse*). Ia juga telah digambarkan secara klinikal oleh *American Psychological Association* (APA) sebagai tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI) yang merupakan gangguan baharu yang perlu dikaji secara lebih lanjut (Xin et al., 2020).

Beberapa kaedah biasa dan popular bagi tingkah laku NSSI adalah seperti mengukir anggota badan atau memotong, membakar, memukul kepala atau menumbuk atau terlibat dalam tingkah laku lain yang boleh menyebabkan kesakitan fizikal tetapi tidak mengancam nyawa (Johari et al., 2022). Menurut kajian di Malaysia, dinyatakan bahawa kadar tingkah laku NSSI dalam kalangan orang dewasa di Malaysia adalah 19 setiap 100,000, dan kadar tingkah laku NSSI dalam kalangan kanak-kanak dan remaja adalah 12 setiap 100,000 (Masiran et al., 2017).

Kajian telah menunjukkan bahawa tingkah laku NSSI mempunyai kecenderungan untuk terlibat dengan tingkah laku yang lebih serius, seperti percubaan membunuh diri (Grandclerc et al., 2016). Remaja yang mempunyai tingkah laku NSSI mempunyai kemungkinan risiko bunuh diri yang lebih tinggi dalam enam bulan pertama selepas terlibat dalam tingkah laku NSSI di mana mereka mempunyai risiko tertinggi untuk membunuh diri (Grandclerc et al., 2016).

Terdapat banyak kajian lepas yang telah dilakukan untuk mengkaji tingkah laku NSSI dalam kalangan remaja, antaranya melibatkan pemboleh ubah pengalaman buruk kanak-kanak dengan tingkah laku NSSI (Walker & Venta, 2023; Wan et al., 2019; Watts, 2022), gejala buli dengan tingkah laku NSSI (Huang et al., 2022; Li et al., 2020; Serafini et al., 2023) dan akademik stres dengan tingkah laku NSSI (Chen et al., 2023; Zhensong et al., 2022).

Seterusnya terdapat model yang menerangkan secara terperinci berkenaan tingkah laku NSSI. Misalnya *The Four-Function Model of Nonsuicidal Self-Injury* (FFM) yang telah dibangunkan oleh Nock dan Prinstein pada 2004 dan dikembangkan oleh Nock et al. (2009). FFM merupakan model yang menerangkan empat faktor atau fungsi bagi memahami penyebab individu melakukan tingkah laku NSSI. Menurut (Bentley et al., 2014) setiap proses terdapat dua dimensi dikotomi: negatif vs positif dan automatik (intrapersonal) vs sosial (interpersonal). Empat proses termasuk pengukuhan negatif automatik (ANR; iaitu NSSI yang berfungsi untuk mengurangkan keadaan afektif atau aversif), pengukuhan positif automatik (APR; iaitu NSSI yang berfungsi untuk menjana perasaan positif), pengukuhan negatif sosial (SNR; iaitu NSSI yang berfungsi untuk memudahkan melarikan diri dari situasi sosial atau menghapuskan tuntutan interpersonal), dan pengukuhan positif sosial (SPR; iaitu, NSSI yang berfungsi untuk menarik perhatian, memudahkan akses kepada sumber, atau menggalakkan tingkah laku mencari bantuan).



Rajah 1: *The Four-Function Model of Nonsuicidal Self-Injury (FFM)*

Kesimpulannya tingkah laku NSSI merupakan salah satu isu kesihatan mental yang semakin meningkat dan telah menjadi masalah kesihatan awam utama di kebanyakan negara (Mannekote Thippaiah et al., 2021; Mummé et al., 2017; Yuan et al., 2023).

Sokongan Sosial

Menurut Hopkins et al. (2018) sokongan sosial adalah sistem rangkaian sosial yang berkaitan dengan sokongan sosial yang terdiri daripada rakan, keluarga, rakan sekerja, pelanggan, pihak kesihatan dan kumpulan bantuan diri. Malah, sokongan sosial adalah persepsi individu tentang sokongan luaran dari keluarga, rakan, atau hubungan lain yang seseorang mahu atau boleh dapatkan (Wu et al., 2011).

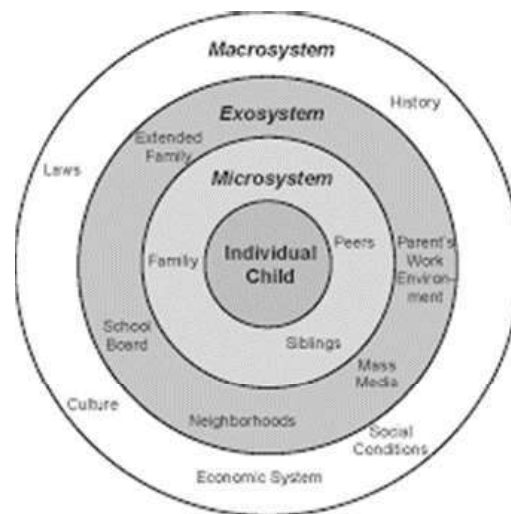
Sokongan sosial dianggap sebagai faktor perlindungan yang dapat mengurangkan kesan buruk tingkah laku emosi negatif dengan berkesan. Ia boleh meningkatkan motivasi psikologi individu, dan memberi manfaat kepada status emosi, kognitif dan psikologi, kesihatan fizikal dan mental mereka (Gülaçtı, 2010).

Remaja yang mempunyai sokongan sosial yang mencukupi dari keluarga, rakan, dan orang

yang signifikan dalam hidup mereka akan mempunyai kesihatan mental yang lebih baik, dan tingkah laku yang kurang berisiko tinggi dalam terlibat dengan tingkah laku NSSI (Lai & Ma, 2016). Menurut Muñoz-Laboy et al. (2014), sokongan sosial menunjukkan persepsi individu yang disayangi, dijaga, dihormati, dan dianggap sebagai sebahagian daripada rangkaian sosial. Persepsi sokongan sosial sangat penting dan berkemungkinan memberikan manfaat psikologi kepada individu yang berhadapan dengan peristiwa tekanan fizikal, psikologi, dan sosial (Tarigan & Apsari, 2021).

Terdapat banyak kajian lepas yang telah dilakukan untuk mengkaji sokongan sosial yang diterima oleh remaja antaranya melibatkan pemboleh ubah sokongan sosial dan kesepian (Gabarrell-Pascuet et al., 2023; Joyce et al., 2022; Zhang & Dong, 2022) dan sokongan sosial dengan tingkah laku NSSI (Kellerman et al., 2022; Yang et al., 2023; Yuan et al., 2023).

Teori Sistem Ekologikal Bronfenbrenner merupakan teori yang dibangunkan oleh Urie Bronfenbrenner, 1977 dalam bidang psikologi perkembangan. Teori ini sesuai digunakan bagi menerangkan sokongan sosial individu. Hal ini demikian kerana, teori ini dapat menerangkan ruang lingkup persekitaran yang memberi pengaruh dan kesan kepada sokongan sosial berdasarkan pengamatan individu. Teori ini juga selari dengan dimensi pemboleh ubah dalam sokongan sosial seperti keluarga, rakan dan individu signifikan.



Rajah 2: Teori Sistem Ekologikal Bronfenbrenner

Kesimpulannya sokongan sosial merupakan faktor pelindung yang membantu individu untuk memiliki tahap kesihatan mental yang sejahtera dan mengurangkan tahap negativiti dalam dirinya (Lee & Ybarra, 2017).

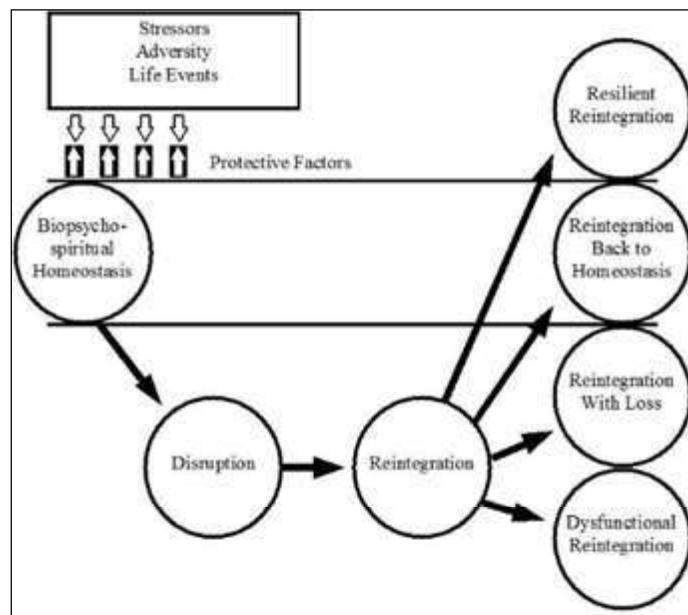
Daya Tahan

Daya tahan menurut Connor dan Davidson (2003) adalah keupayaan untuk beradaptasi dengan tahap perubahan yang tinggi sambil memaparkan tingkah laku tidak berfungsi yang minimum. Daya tahan juga merupakan keupayaan untuk menyesuaikan diri dengan cekap dan menyesuaikan diri dengan kesukaran yang biasanya dilihat dalam cara seseorang individu bertahan dalam sesuatu situasi emosi yang ketara tetapi tetap positif (Tugade & Fredrickson, 2007).

Daya tahan boleh menjadi sumber perlindungan yang ada ketika menghadapi situasi tekanan untuk memulihkan keseimbangan tahap psikologi individu, dan mencapai penyesuaian yang baik untuk remaja mengelakkan daripada tingkah laku NSSI (Cha & Lee, 2018).

Terdapat banyak kajian lepas yang telah dilakukan untuk mengkaji daya tahan antaranya melibatkan pemboleh ubah daya tahan dengan tingkah laku NSSI (He & Xiang, 2022; Wilson & Kutty, 2021; Zhang et al., 2023) dan daya tahan dengan *burnout* (Di Trani et al., 2021; Elkudssiah Ismail et al., 2022; Fernández-Castillo & Fernández-Prados, 2023).

Teori daya tahan telah dibincangkan secara terperinci dalam kajian yang dilakukan oleh Richardson (2002). Terdapat tiga tahap yang berbeza iaitu tahap pertama, menumpukan kepada aspek keselamatan, terutamanya berkaitan dengan golongan muda yang berada dalam situasi kehidupan yang berisiko tinggi. Tahap kedua, kajian tersebut mengupas bagaimana seseorang boleh mencapai daya tahan. Tahap ketiga pula, Richardson menjelaskan bagaimana motivasi dalaman seseorang memainkan peranan penting ketika mereka berhadapan dengan kesukaran dan menunjukkan daya tahan diri. Berdasarkan teori Richardson (2002), daya tahan dipandang sebagai kuasa dalaman yang mendorong individu untuk mencapai impian atau matlamat peribadi mereka, memberi keutamaan kepada orang lain, serta mempunyai sifat seperti kemurahan, kebijaksanaan, dan harmoni yang bersumberkan daripada kekuatan rohani (Osman et al., 2015).



Rajah 3: Teori Daya Tahan Richardson

Kesimpulannya, daya tahan merupakan faktor pelindung yang membantu kemampuan individu untuk dapat beradaptasi dalam kesulitan yang dihadapi, sehingga dapat bersikap tenang dan bangkit dari kesulitan yang dihadapi serta menemukan kembali semangat, kekuatan, dan tujuan yang realistik (Liu et al., 2021).

Hubungan antara Sokongan Sosial dengan Tingkah Laku Mencederakan Diri Tanpa Niat Bunuh Diri (NSSI)

Kajian-kajian masa kini mula memfokuskan kepentingan sokongan sosial dalam penglibatan dan keberterusan tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI) semasa tempoh pembangunan kajian (Brown & Witt, 2019). Kajian-kajian lepas yang dilakukan oleh Kellerman et al. (2022), Madjar et al. (2021) dan Xin et al. (2020) kebanyakannya memperoleh dapatan kajian yang selari dengan menunjukkan bahawa terdapat hubungan korelasi negatif yang signifikan antara sokongan sosial dengan tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI).

Antara instrumen sokongan sosial yang digunakan oleh pengkaji lepas adalah seperti *The Multidimensional Scale of Perceived Social Support* (Zimet et al., 1988) dengan nilai kebolehppercayaan 0.94 dan *Wang's Perceived Social Support Scale* (PSSS; Wang, 1999) $\alpha = .94$. Instrumen MSPSS versi asal dan versi yang diadaptasi, kedua-duanya mengukur sokongan sosial yang diterima oleh remaja secara menyeluruh dari tiga aspek dimensi iaitu keluarga, rakan dan individu signifikan berbanding dengan instrumen lain seperti *Teacher-Student Relationships Scale* (Pianta & Nimetz, 1992) yang hanya mengukur pada satu dimensi sahaja, atau instrumen yang mengukur sokongan sosial secara umum seperti *Social Support Scale* (Sarason et al., 1983) dan *The Perceived Social Support Questionnaire* (Procidano & Heller, 1983).

Manakala, bagi instrumen NSSI pula kebanyakan pengkaji lepas menggunakan *Nonsuicidal Self-Injury Assessment Tool* (NSSI-AT) yang dibangunkan oleh Whitlock et al., (2007). NSSI-AT menyenaraikan kaedah NSSI seperti memotong, mengukur dan sebagainya dengan nilai kebolehppercayaan $\alpha = 0.88$. Pengkaji-pengkaji lepas telah mengadaptasi soalan kajian agar sesuai dengan responden dan budaya setempat, seperti yang dilakukan oleh Xin et al. (2020) dalam kajiannya, *Impact of Negative Life Events and Social Support on Nonsuicidal Self-Injury Among Chinese Middle School Students*. Menurut Xin et al. (2020) adaptasi instrumen dilakukan adalah untuk memastikan instrumen selari dengan budaya setempat dan sesuai dengan responden di negara China.

Walaupun kajian lepas berkaitan sokongan sosial dengan tingkah laku NSSI banyak dilakukan di luar negara, namun kajian-kajian lepas lebih memfokuskan terhadap sokongan sosial (keluarga atau rakan atau individu signifikan) berdasarkan persepsi remaja (Forster et al., 2020; Madjar et al., 2021). Namun begitu, menurut Lai & Ma (2016), kepentingan mengkaji sokongan sosial berdasarkan ketiga-tiga aspek sokongan sosial, iaitu keluarga, rakan dan individu signifikan adalah penting kerana remaja yang mendapat ketiga-tiga sokongan sosial adalah lebih rendah kecenderungan melakukan NSSI. Kebanyakan kajian lepas juga memfokuskan kajian ke atas sampel klinikal (Daukantaite et al., 2021; Kallermen et al., 2022; Mendez et al., 2022; Raffagnato et al., 2022). Tambahan pula, sehingga kini masih amat kurang kajian yang melibatkan sokongan sosial dan tingkah laku NSSI di Malaysia. Justeru, amat perlu kajian-kajian sebegini dilaksanakan dalam konteks tempatan, khususnya dalam golongan remaja di Malaysia.

Hubungan antara Daya Tahan dengan Tingkah Laku Mencederakan Diri Tanpa Niat Bunuh Diri (NSSI)

Kajian yang dilakukan oleh Ran et al. (2022), Tian et al. (2021), dan Ran et al. (2020) menunjukkan bahawa daya tahan dan tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI) mempunyai hubungan korelasi negatif yang signifikan selari secara konsisten dengan kajian-kajian lepas yang lain. Kebanyakan kajian lepas bukan sahaja memfokuskan golongan remaja sebagai sampel kajian, bahkan kebanyakan kajian lepas dilaksanakan di negara China.

Justeru, pengkaji pada masa hadapan disarankan melaksanakan kajian berkaitan daya tahan dan tingkah laku NSSI dalam kalangan remaja di Malaysia bagi melihat sama ada dapatan kajian adalah selari dengan kajian lepas ataupun sebaliknya. Memandangkan kebanyakan kajian dilakukan di negara China, maka pengkaji lepas telah menggunakan instrumen yang telah diadaptasi dari versi China seperti contoh, instrumen *Modified version of Adolescents Self-Harm Scale* (MASHS) yang diadaptasi oleh Feng (2008) dengan nilai kebolehppercayaan $\alpha = 0.85$ untuk mengukur tingkah laku mencederakan diri tanpa niat membunuh diri dan instrumen *The Resilience Scale for Chinese Adolescents* (RSCA) (Hu & Gan, 2008) dengan nilai kebolehppercayaan $\alpha = 0.77$ bagi mengukur daya tahan.

Sekiranya pengkaji masa hadapan ingin menggunakan instrumen seperti *The Resilience Scale for Chinese Adolescents* (RSCA) (Hu & Gan, 2008), *Connor-Davidson Resilience Scale*

(Connor & Davidson, 2003), *Nonsuicidal Self-Injury Assessment Tool* (Whitlock et al., 2007) dan *Modified version of Adolescents Self-Harm Scale* (MASHS) (Feng, 2008), maka pengkaji perlu mengadaptasi ke dalam versi Malaysia dan menyesuaikan dengan budaya dan norma masyarakat di Malaysia. Selain dapatan kajian yang selari, kebanyakan pengkaji lepas menggunakan daya tahan sebagai pemboleh ubah pengantara dalam mengkaji hubungan antara pemboleh ubah bebas lain dengan tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI). Sama seperti limitasi kajian-kajian sebelum ini, kebanyakan pengkaji menggariskan bahawa reka bentuk kajian dan saiz sampel adalah limitasi yang perlu ditambahbaik.

Walaupun kajian lepas banyak dilakukan, namun kajian-kajian lepas lebih memfokuskan daya tahan dengan idea bunuh diri (Hendricks et al., 2023; Luo et al., 2023; Zhang et al., 2023). Kebanyakan kajian lepas juga memfokuskan kajian ke atas remaja di China (Ran et al., 2022; Tian et al., 2021; Zhang et al., 2023). Sehingga kini, masih kurang kajian melibatkan daya tahan dan tingkah laku NSSI di Malaysia. Justeru, amat perlu kajian-kajian sebegini dilaksanakan dalam konteks tempatan, khususnya dalam golongan remaja di Malaysia.

3.0 Metodologi

Kajian ini menggunakan metodologi secara penyelidikan kepustakaan, di mana datanya diperolehi daripada carian artikel dalam internet menggunakan pengkalan data seperti Scopus dan Google Scholar dan juga pengkalan data yang lain. Dapatan kajian-kajian lepas tersebut diteliti oleh pengkaji bagi menyokong perbincangan skop kajian. Pengkaji turut menganalisis buku-buku, jurnal, dan pelbagai jenis sumber literatur lain yang berkaitan dengan kajian. Kebanyakan kajian lepas diambil dari dalam negara dan luar negara bagi mendapatkan maklumat yang lebih holistik. Selepas bahan-bahan rujukan yang diperlukan dicari dan dijumpai, pengkaji meneliti setiap maklumat yang ada dalam rujukan dengan menggunakan Jadual Sistematik Tinjauan Kajian (SLR).

4.0 Kesimpulan

Secara umumnya, konsep dalam kertas ini membincangkan sokongan sosial dan daya tahan sebagai pemboleh ubah bebas dan tingkah laku NSSI sebagai pemboleh ubah bersandar. Analisis kajian-kajian lepas menunjukkan terdapat hubungan negatif yang signifikan antara sokongan sosial dengan tingkah laku NSSI, manakala terdapat juga hubungan negatif yang signifikan antara daya tahan dengan tingkah laku NSSI. Namun begitu, masih terdapat beberapa limitasi kajian lepas yang perlu ditambah baik oleh pengkaji akan datang seperti melaksanakan pendekatan kajian longitudinal untuk meneroka dari masa ke masa, mempertimbangkan saiz sampel kajian di samping melibatkan remaja dari beberapa negeri lain di Malaysia sebagai responden kajian dan menggunakan ujian pengukuran yang lebih tepat seperti rekod kesihatan khusus yang melibatkan pemboleh ubah NSSI.

Kesimpulannya, tingkah laku mencederakan diri tanpa niat membunuh diri (NSSI) merupakan tingkah laku yang berbahaya dan tidak diterima oleh komuniti sosial kerana ia mendatangkan akibat yang negatif kepada remaja seperti pemikiran bunuh diri atau percubaan bunuh diri yang kerap. Oleh itu, kajian ini dapat membantu dari segi memahami hubungan antara setiap pemboleh ubah kajian. Sokongan sosial dan daya tahan boleh digunakan sebagai intervensi yang dapat membantu remaja yang terlibat dalam tingkah laku NSSI untuk beradaptasi sendiri dengan baik bagi mengurangkan atau memberhentikan tingkah laku NSSI.

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Cabaran Kehidupan Selepas Pengajian Pra Universiti**Azra Zainol Rashid¹, Norlizah Che Hassan^{2*} & Nur Raihan Che Nawi³**^{1,2,3}Universiti Putra Malaysia, Serdang, Selangor, Malaysia*E-mel koresponden: norlizah@upm.edu.my***Abstrak***

Dalam dunia yang semakin canggih ini, cabaran kehidupan dalam kalangan pelajar sebaik sahaja tamat pengajian sama ada SPM, prauniversiti dan universiti demi kelangsungan hidup mereka adalah penting untuk dikaji. Cabaran di Malaysia terutamanya selepas Covid 19 membuka mata betapa pentingnya aspek persediaan yang perlu didepani. Kajian terdahulu dalam aspek ini terutamanya yang melibatkan pelajar tidak dilakukan secara menyeluruh, sekaligus menggugat usaha yang berterusan dalam melahirkan warganegara Malaysia yang berkeupayaan mencapai kesejahteraan diri, serta memberi sumbangan terhadap keharmonian dan kemakmuran keluarga, masyarakat dan negara sebagaimana termaktub dalam Falsafah Pendidikan Kebangsaan. Justeru, objektif kajian ini adalah untuk mengenalpasti cabaran-cabaran yang bakal dihadapi pelajar selepas pengajian prauniversiti mereka. Pelajar yang mengikuti pengajian prauniversiti adalah golongan yang paling ideal dicaknakan dengan cabaran-cabaran ini dalam kajian ini memandangkan mereka mula meletakkan kebertanggungjawaban dengan hala tujuan kehidupan mereka. Hasil kajian mendapati terdapat tiga tema atau aspek cabaran yang perlu didepani bila menyentuh pelajar prauniversiti agar mereka lebih bersedia menghadapi cabaran selepas pengajian mereka iaitu tujuan (purpose), hubungan (connections) dan gaya hidup (life style). Daripada tiga aspek tersebut, hasil kajian mendapati terdapat 13 sub tema yang menghurai secara lebih terperinci tentang cabaran kehidupan tersebut. Justeru, perhatian serius diperlukan dalam merekayasa warganegara yang dapat menzahirkan roh Falsafah Pendidikan Kebangsaan secara maksimum khususnya melahirkan warganegara Malaysia yang berkeupayaan mencapai kesejahteraan diri perlu ditangani segera. Pemerekayasa ini dapat dilakukan secara komprehensif melalui program latihan secara pementoran. Malaysia masa depan yang akan diterajui oleh anak-anak kita kelak adalah hasil dari acuan yang kita bentuk pada hari ini. Kegagalan Malaysia akan datang (Future Malaysia) adalah kegagalan acuan yang kita sendiri sediakan.

Kata kunci: *cabaran pengajian pelajar, pra universiti Malaysia, Falsafah Pendidikan Kebangsaan*

1.0 Pendahuluan

Persediaan pelajar selepas pengajian prauniversiti untuk mendepani cabaran selepas tamat pengajian merupakan aspek kritikal dalam kajian ini. Seseorang anak akan menempuh usia persekolah sepanjang kurang lebih sebelas tahun. Ketika ini mereka didedahkan dengan pelbagai pengisian pendidikan bermula dari kemahiran 3M sehingga pendidikan menengah mengikut bidang yang telah disediakan oleh pemegang taruh. Setelah tamat arus perdana pendidikan menengah, anak-anak ini akan menelusuri kehidupan selepas persekolah yang pelbagai. Ada yang sudah mula bekerjaya. Namun rata-rata akan meneruskan pengajian sama ada akademik atau

kemahiran tertentu. Sekali lagi, mereka ini boleh dikatakan masih berada dalam subset belajar. Ketika ini kebanyakan mereka ini berada dalam fasa transisi antara persekolahan dan universiti. Peralihan ini sangat penting kerana di sinilah bermulanya fasa peralihan kehidupan sebenar kehidupan.

Menurut statistik Jangkaan Hayat Malaysia 2022^e, jangka hayat rakyat Malaysia boleh mencecah lebih 73 tahun. Katakan rakyat Malaysia mula bekerja pada usia 23 tahun, ini bermaksud kehidupan 50 tahun selepas menamatkan pengajian sekolah dan pengajian selepas sekolah jika ada perlu dirancang dengan baik. Namun ia tidak dilakukan secara formal yang meliputi cabaran-cabaran kehidupan yang tidak dipelajari terutamanya di sekolah. Kehidupan 50 tahun bukanlah suatu masa yang singkat dan persediaan menghadapinya adalah satu keperluan terutamanya bila ia melibatkan generasi alpha yang terdedah dengan dunia VUCA ini. Justeru kajian ini bertujuan untuk mengenalpasti cabaran-cabaran yang harus didepani oleh pelajar prauniversiti agar generasi yang akan mengambil alih Malaysia ini akan mampu memperkasakan negara ke arah yang lebih baik.

Menurut Abd. Lateef (2023) semasa di Persidangan Antarabangsa ke-4 mengenai Belia 2023 (ICYOUTH) 2023, menyatakan terdapat tiga perkara penting untuk direkayasa dalam diri seseorang belia iaitu tujuan (*purpose*), hubungan (*connections*) dan gaya hidup (*life style*). Dan ketiga-tiga perkara ini, merupakan tema yang diketengahkan dalam kajian ini. Ia selari dan diterangkan dengan lebih mendalam oleh Jailani et al. (2020), bahawa isu utama yang dihadapi oleh pelajar kolej prauniversiti ialah hubungan antara peribadi dan psikologi mereka, moral dan agama, hubungan sosial-psikologi, kesihatan dan pembangunan fizikal, rumah dan keluarga, kurikulum dan prosedur pengajaran, aktiviti sosial dan rekreasi, kewangan, keadaan hidup dan pekerjaan, pacaran, seks dan perkahwinan. Turut diketengahkan ialah trend hasil, pengawasan manusia dan penyalahgunaan perlu diambil kira (Kasneci et al., 2023). Tugas paling mencabar yang dihadapi oleh pendidik ialah mengajar pelajar mereka cara berinteraksi secukupnya sebagai warganegara yang aktif dan komited dalam masyarakat global yang berpengetahuan luas. Selain itu, institusi pendidikan perlu mengambil kira pengetahuan pelajar tentang teknologi digital supaya mereka boleh membangunkan model pendidikan baharu yang memenuhi keperluan semasa (Monroy et al., 2020).

2.0 Objektif Kajian

Objektif kajian ini adalah untuk menyenaraikan cabaran-cabaran yang perlu didepani pelajar lulusan prauniversiti untuk menyediakan diri mereka memasuki dunia yang VUCA ini.

3.0 Metodologi Kajian

Kajian ini merupakan kajian sorotan literatur dengan cara mensintesis informasi daripada pengumpulan artikel, buku dan jurnal, dan kemudian menyusunnya menjadi satu kerangka pemahaman yang komprehensif bagi menjawab persoalan kajian. .

4.0 Dapatan Kajian

Hasil daripada pencarian tinjauan literatur, pelajar prauniversiti mungkin mengetahui pelbagai cabaran selepas pengajian mereka. Menurut Munir et al. (2019), apabila menyentuh cabaran ini, pelajar harus berusaha mencari penyelesaian untuk menyelesaikan sebarang masalah. Justeru dengan menggunakan Google Scholar dan terhad kepada empat tahun kebelakang (2019 – 2023) mendapati, cadaran-cabaran kehidupan pelajar adalah seperti berikut:

• Kaedah pembelajaran:

Kaedah pembelajaran dalam kalangan pelajar adalah berbeza mengikut umur. Malah setiap

individu mempunyai cara belajar yang berbeza. Cabaran ini turut dihadapi semasa berada dalam tempoh pengajian mereka semasa dan selepas tamat pengajian prauniversiti. Salah satu matlamat utama dalam pendidikan prauniversiti adalah untuk memberikan akses yang saksama kepada pendidikan universiti. Ini adalah penting kerana pelajar yang lemah dari segi akademik boleh mendapat manfaat yang lebih besar daripada program prauniversiti. Kecerdasan emosi pelajar, terutamanya dalam hubungan interpersona dan intrapersona, memainkan peranan penting dalam prestasi akademik mereka dalam program prauniversiti. Walau bagaimanapun, pentafsiran mengenai pembelajaran sendiri adalah lebih rumit dan perlu dikaji lebih lanjut untuk memahami sepenuhnya hubungannya dengan prestasi akademik. (Okwuduba et al., 2021). Adalah disyorkan bahawa pengajar harus menggunakan pelbagai kaedah pengajaran untuk menggalakkan penglibatan pelajar mengikut bidang pengajian mereka (Halif et al., 2020).

• **Melanjutkan Pengajian Selepas Prauniversiti:**

Cabaran memilih bidang pengajian yang sesuai di universiti selepas tamat pengajian di prauniversiti boleh menjadi dilemma dalam kalangan pelajar. Ini disokong oleh Al Tamimi et al. (2023) yang menyatakan, oleh kerana kadar dan perbezaan yang ketara dalam pendidikan tinggi, memilih universiti yang paling sesuai dengan matlamat pelajar adalah penting. Setelah pemilihan dibuat, cabaran di universiti turut melamar mereka. Faktor akademik adalah pemacu utama tekanan di kalangan pelajar universiti. (Johari & Ahmad, 2019). Ini turut diakui Mohd Helmi et al. (2016) yang menyatakan prospek kerjaya juga merupakan pertimbangan penting dalam memilih bidang pengajian.

• **Pembangunan diri:**

Semakin seseorang individu meningkat dewasa, peluang untuk memperbaiki diri dalam aspek kemahiran, kepimpinan, dan pembinaan diri perlu dilengkapi secara holistik. Remaja merupakan tunggak dan harapan bangsa pada masa hadapan. Golongan ini merupakan generasi muda yang bakal meneraju kepimpinan negara pada masa hadapan. Sekiranya generasi ini rosak, maka akan berlakunya kerosakan pada pentadbiran dan pemerintahan negara masa akan datang (Rahman et al., 2022). Falsafah Pendidikan Kebangsaan harus menjadi sandaran utama dalam menyantuni sisa-siswi prauniversiti.

• **Kewangan:**

Kewangan adalah instrumen penting untuk meneruskan kesinambungan hidup selepas tamat pengajian. Cabaran kewangan untuk menjaga kos pengajian, kos sara hidup, dan kemungkinan perlu meminjam untuk melanjutkan pelajaran. Keperluan untuk mendapatkan biasiswa, beban kewangan juga memberi kesan kepada kehidupan. (Ramachandiran & Dhanapal 2018). Pengurusan kewangan yang tidak sistematik akan mendorong kepada masalah seperti ketirisan kewangan, penyelewengan dan ketidakstabilan kewangan. Perkara ini akan mendatangkan impak yang negatif terhadap generasi milenial untuk menguruskan kewangan dalam kehidupan seharian mereka dengan baik (Hassim & Ramli, 2022). Justeru, mengambil ringan tentang kewangan dari segi pengurusannya boleh membantutkan pembangunan negara secara tidak langsung.

• **Masuk ke dalam komuniti:**

Manusia adalah makhluk sosial. Pelajar prauniversiti seharusnya sudah ada skil ini. Penting untuk memasukkan pendidikan sosialisasi yang memberi tumpuan kepada kognitif dan memupuk sikap positif (Khalisharani, 2022). Menyesuaikan diri dengan persekitaran sosial yang berbeza setelah meninggalkan pengajian seawal tadika sehingga universiti, proses bersosial berlaku dan memahami peranan anggota masyarakat yang bertanggungjawab adalah sesuatu yang pasti. Jusoh & Embong (2021) mendapati cabaran dalam memperkukuh masyarakat superdiversiti merangkumi aspek etnik, agama, budaya, sosioekonomi, politik dan pendidikan. Pendekatan yang bijaksana dan kerjasama daripada semua pihak diperlukan bagi menghadapi cabaran ini seterusnya mengekalkan kesepaduan sosial. Malah menyesuaikan diri dalam komuniti turut melibatkan ketika mula memasuki prauniversiti. Kajian di Institut Pendidikan Guru menurut Besar et al. (2020), menyatakan bahawa tahap penyesuaian akademik dan sosial pelajar tahun

pertama PPISMP di IPG adalah mudah. Selain itu, pelajar juga menghadapi cabaran penyesuaian akademik dan sosial. Dalam menangani cabaran ini, pelbagai strategi telah digunakan seperti optimis, mendapat sokongan, membuat rancangan dan membuat perubahan.

• **Kerjaya:**

Aspek kerjaya juga memberikan cabaran yang perlu dihadapi oleh pelajar. Malah seawal tamat sekolah lagi, kerjaya dilihat menjadi keutamaan dalam kalangan pelajar. Pesa et al. (2020) menyatakan bahawa pelajar tidak bersedia untuk memasuki dunia kerjaya. Mempunyai kerjaya yang sesuai merupakan cabaran bagi pelajar setelah tamat pengajian mereka. Perkara yang perlu dielakkan atau sekurang-kurangnya dikurangkan adalah pengangguran. Pengangguran yang berlaku kini amat membimbangkan walaupun berlaku penurunan. Menurut Aun (2022), pengangguran belia menimbulkan cabaran mendesak bagi Malaysia. Bila sudah mempunyai kerjaya, aspek cabaran semakin meruncing. Semakin tinggi beban kerja dan konflik peranan yang dirasakan oleh pekerja, semakin kurang keseimbangan kerja-kehidupan yang mereka nikmati. (Omar, Mohd, & Ariffin, 2015).

• **Keluarga:**

Setiap ahli dalam keluarga memainkan peranan penting dalam kehidupan. Menyesuaikan diri dengan perubahan dinamik keluarga selepas tamat pengajian prauniversiti dan menjalankan tanggungjawab sebagai ahli keluarga. Keluarga adalah institusi asas dalam pembinaan negara. Namun membina keluarga perlu diperkasakan. Ia bukan semata-mata keinginan untuk berkeluarga. Jika tidak dirancang dengan baik, ia boleh mengundang sesuatu yang negatif dalam berkeluarga. Kajian terkini menunjukkan bahawa beberapa faktor yang mempengaruhi kenakalan termasuk penglibatan ibu bapa, pemisahan ibu bapa, tekanan rakan sebaya, terlibat dalam geng jenayah, dan penglibatan ibu bapa dalam jenayah. Penemuan menunjukkan bahawa ibu bapa dan remaja memerlukan bimbingan dan kaunseling untuk membantu mereka menghadapi cabaran hidup dan meningkatkan kemahiran sosial dan emosi mereka (Zakaria et al., 2022). Selain itu, masalah keluarga juga memberi kesan kepada kehidupan. (Ramachandiran & Dhanapal 2018).

• **Kesihatan fizikal dan Mental:**

Dunia dikejutkan dengan Covid 19. Rakyat Malaysia pastinya turut terkesan secara fizikal malah mental. Menguruskan kesihatan fizikal dan mental dengan cara yang seimbang untuk mengatasi tekanan dan cabaran dalam kehidupan selepas pengajian prauniversiti adalah suatu keperluan. Kesihatan mental pelajar Malaysia adalah mencabar, dan mencari bantuan bagi mereka adalah rendah kerana stigma (Kotera & Ting., 2021). Kajian mengenai cabaran kehidupan, Jaafar et al. (2021), menyatakan bahawa faktor penentu matlamat adalah faktor perkembangan psikososial yang paling stabil. Menyentuh tentang kesihatan fizikal, Malaysia dijangka mendapat status negara tua pada tahun 2030. Penuaan penduduk berlaku apabila penambahan jangka hayat penduduk dan berlakunya penurunan kadar kesuburan. Peningkatan jumlah warga tua adalah hasil daripada perkembangan kemudahan kesihatan, kemajuan teknologi, kesedaran penduduk terhadap kepentingan penjagaan kesihatan, peningkatan taraf pendidikan, dan pekerjaan (Adnand et al., 2021). Untuk membantu remaja menjadi orang yang berharga, pakar kesihatan awam dan ahli psikologi sekolah mesti dilantik (Zakaria et al., 2022).

• **Motivasi diri:**

Mengekalkan motivasi diri yang tinggi dalam mengatasi rintangan dan mencapai matlamat pendidikan dan kerjaya adalah suatu keperluan yang mendesak. Adalah dicadangkan bahawa motivasi harus diperkaya dalam kalangan pelajar untuk menghasilkan penglibatan kelas pelajar yang lebih tinggi. (Halif et al., 2020). Ketika ini, motivasi diri tidak dijadikan satu silibus formal. Ia hanya dilakukan sekadar aktiviti sokongan atau berkala.

• **Simpanan:**

Menabung dengan bijak untuk menjangka keperluan kewangan masa depan dan menjangkakan ketidakstabilan ekonomi adalah sangat penting. Menurut Khalisharani (2022), adalah penting

untuk memasukkan pendidikan kewangan yang memberi tumpuan kepada kognitif dan memupuk sikap positif. Budaya menyimpan ini memerlukan sokongan dan undang-undang yang lebih kuat daripada kerajaan dan pemegang taruh yang berkaitan.

• Politik:

Keadaan politik dalam kalangan pengundi muda dilihat semakin baik. Ini dibuktikan dengan peratus keluar mengundi bagi golongan ini. Namun memahami isu-isu politik dan bertindak sebagai warga negara yang bijak dalam proses pembinaan negara adalah penting diketengahkan. Kajian yang diperoleh daripada Institut Kajian Etnik (KITA) dengan mengambil kira 1349 orang pelajar dari lima buah universiti penyelidikan mendapati 764 atau 56.6% tahap pengetahuan politik mereka adalah pada tahap rendah (Zan et al., 2016). Manakala tahap kefahaman politik pula adalah pada tahap sederhana (64.3%).

• Teknologi:

Generasi yang hidup ketika ini tidak dapat lari daripada teknologi. Menyesuaikan diri dengan kemajuan teknologi dan menggunakannya untuk pembelajaran dan pengembangan kerjaya adalah sesuatu yang kritikal dan perlu difokuskan. Teknologi kini dimanipulasi untuk kegiatan jenayah dalam pelbagai cara terutama dalam talian. Pelajar prauniversiti perlu berhati-hati dengan ancaman ini. Sebagai contoh, gangguan seksual siber adalah satu jenayah yang perlu diberi perhatian serius oleh semua pihak kerana dengan bantuan teknologi zaman sekarang, semua individu yang berada dalam talian berpotensi untuk menjadi mangsa kepada gangguan seksual siber tanpa mengira demografi seseorang. (Pitchan et al., 2023). Satu lagi hasil kajian Razak et al. (2021) mendapati gejala pornografi ini semakin meningkat malah mempengaruhi akhlak dan pemikiran manusia terutama dalam kalangan remaja berusia dalam lingkungan 11 hingga 22 tahun. Beralih kepada buli siber pula, buli siber adalah masalah serius yang mempengaruhi banyak remaja, termasuk di Malaysia, dan artikel ini membahas bagaimana perilaku komunikasi yang kurang sopan dalam perbualan maya dapat memburukkan lagi situasi ini. Justeru, dalam dunia tanpa sempadan ini, faktor kecaknaan dalam menggunakan teknologi perlu didedahkan secara intensif.

• Asas agama:

Akhirnya, mengekalkan kecemerlangan dalam amalan agama dan mengintegrasikan nilai-nilai agama ke dalam kehidupan seharian adalah sesuatu perkara asas yang perlu bagi diri kita. Kajian Ismail (2019) menentukan asas bagi keperluan untuk mewujudkan model khusus untuk pembangunan kehidupan keagamaan supaya pemberdayaan boleh dilaksanakan secara berkala dengan pengawasan universiti. Oleh itu, untuk membolehkan pelajar memperkuat pegangan agama mereka, pendekatan formal perlu diteruskan.

Solat merupakan aspek paling pokok bila menyentuh tentang asas pegangan agama. Kajian di UiTM Shah Alam, secara keseluruhan peratusan mahasiswa yang mendirikan solat fardu cukup lima waktu ialah sebanyak 49.69%. Ini bermakna 50.30% mahasiswa pernah meninggalkan solat fardu manakala bagi solat subuh, peratusan yang kerap meninggalkannya lebih tinggi daripada yang sesekali meninggalkannya. (Mohd Mansor, 2021). Kajian di Politeknik Tuanku Syed Sirajuddin di Perlis menunjukkan peratusan tertinggi pelajar selalu menunaikan solat adalah bagi fardhu maghrib iaitu sebanyak (60%) dan fardhu Isyak sebanyak (57%). Manakala peratusan terendah pelajar selalu menunaikan solat ialah bagi fardhu zohor (50%) diikuti fardhu subuh (51%) dan asar sebanyak (54%). Ini menunjukkan peratusan pelajar meninggalkan fardhu zohor, subuh dan asar agak tinggi. (Ahmad, 2019).

5.0 Kesimpulan

Secara kesimpulan berdasarkan kajian tiga tahun kebelakangan menggunakan Google Scholar menyiasat cabaran yang dihadapi oleh pelajar pra-universiti dan universiti telah dikumpulkan dan

penyelidik telah menyelesaikan tiga tema atau aspek utama cabaran ini menjadi 13 menyentuh subtema mengenai cabaran yang dihadapi oleh pelajar prauniversiti terutamanya apabila tamat pengajian. Jadual 1 menerangkan kesimpulan yang diperoleh.

Jadual 1: Cabaran Kehidupan Pelajar Prauniversiti

Tujuan (<i>Purpose</i>)	Hubungan (<i>Connections</i>)	Gaya Hidup (<i>Life Style</i>)
Asas Agama	Keluarga	Kewangan
Kaedah Pembelajaran	Komuniti	Kesihatan Fizikal/Mental
Sambung Pengajian	Teknologi	Simpanan
Pembangunan Kendiri		Politik
Motivasi		
Kerjaya		

6.0 Penghargaan

Kementerian Pendidikan Malaysia.

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The Influence of Parents' Perception of Policy Implementation and Family Finances on Educational Anxiety in the Era of Double Reduction Policy: Exploring the Mediating Role of Access to Alternative Educational Resources

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Abstract

China's double reduction policy, designed to curb excessive extracurricular tutoring, has sparked widespread debate and raised concerns among parents regarding its potential impact on the academic future and competitiveness of the younger generation. Forward-thinking parents are exploring alternatives such as one-on-one tutoring or paid online learning. However, financial limitations intensify their worries, especially for families facing economic challenges. A recent study involving 200 parents delved into their perspectives on policy implementation, family financial situations, and the role of alternative resources in educational stress. The results revealed a clear trend: the stricter the implementation of the double reduction policy in a region, the higher the level of parental anxiety about education becomes. Parents with limited financial means hesitate more than their wealthier counterparts when considering the use of paid alternative educational options. Addressing these concerns requires concerted efforts from the government and society to ensure equal access to education and reduce parental anxiety. Furthermore, the establishment of a dynamic tracking and feedback system for the double reduction policy is crucial. Actively involving parents in the process will enable a better understanding of their needs, allowing educational policies to align effectively with national educational objectives.

Keywords: *Alternative education resource, double reduction policy, educational anxiety, educational equity*

1.0 Introduction

China's double reduction policy, a highly anticipated educational reform wave, aims to ease students' heavy academic loads, decrease family education expenses, and enhance students' overall well-being (Qian et al., 2023). Its implementation has sparked extensive discussions, altering family education budgets, impacting parental anxieties, and influencing the availability of alternative educational resources (Xu, 2023). In recent years, the Chinese government has taken various measures, such as reducing academic workloads, bridging educational disparities, and promoting innovative teaching methods in schools. Wang et al. (2022) argue that these measures aim to promote students' holistic development beyond mere grades. However, the actual impact of the policy on students, families, and schools remains a complex and worthwhile topic for exploration.

Moreover, Cai et al. (2022) noted that the double reduction policy has led to societal changes, including reforms in education institutions, shifts in parental beliefs, and the redistribution of family education funds. These factors add complexity to understanding the interactions within the education system. Therefore, this article aims to deeply examine the impact of the double reduction policy on parental education anxiety. We not only explore its connection

with alternative educational resources and family finances but also assess its potential in relieving the financial burden on parents. Additionally, we stress the importance of adapting the policy according to the current state of education in China. This comprehensive study aims to provide insights into the overall effects of educational reform on China's education system and potential avenues for future improvements.

2.0 Literature Review

Parents' Perceptions of the Implementation Level of the Double Reduction Policy

An essential focus of current research involves evaluating the effective implementation of the double reduction policy. Chen (2022) emphasizes the varied approaches taken by different areas and schools, such as limiting after-school training groups and reducing the number of subjects taught. Diverse regions within the country adopt distinct strategies for policy enforcement, significantly impacting family education options and parental attitudes toward their children's education. A study by Li et al. (2022) revealed that students find homework easier in regions with stricter policy adherence. However, this policy shift also led to the emergence of alternative teaching methods. While it curbed the proliferation of individual tutoring groups, thus easing financial strain on parents (Chen et al., 2022), it disrupted traditional avenues for parental and student academic support. Consequently, parents now seek other learning avenues, like one-on-one training and online platforms with educational fees (Yao, 2022). This dynamic interaction between policy implementation, alternative educational resources, and parental anxieties creates a complex scenario. The policy's effects vary across regions, necessitating adjustments in family education approaches. This complexity complicates educational decisions for families, demanding thorough research to comprehend how these factors interconnect and influence both educational experiences and the growth of families and students.

Family Economic Situation: A Key Factor in Policy Implementation Effects

In academic studies, the economic status of a family plays a pivotal role as it intricately connects with the level of policy implementation. Educational expenses often constitute a significant portion of a Chinese family's income. Consequently, the acceptance of certain policies can profoundly impact a family's financial stability (Yueh, 2006). Research indicates that families tend to reduce spending on private tutoring in regions where policies are strictly enforced, thus positively affecting their finances. However, findings from Lu et al. (2023) suggest that these policies may pose challenges for specific educational institutions, affecting the income of families engaged in the education and training sector. Cao et al. (2023) further highlight that some struggling students, denied access to regular extracurricular tutoring, seek alternative learning methods. However, many of these options, such as one-on-one tutoring or paid online platforms, come at higher costs, increasing the overall financial burden on families. Psaki et al. (2022) note that while a slight increase in educational spending might not significantly impact the middle class, it represents a substantial financial strain for most families. Hence, the effective implementation of policies, the availability of educational resources, and parental concerns all intricately affect a family's financial situation.

Alternative Educational Resources: New Options Under Double Reduction Policy

A wide array of alternative educational resources exists, incorporating diverse methods, tools, and platforms, each displaying variations in concepts, content, and formats (Mogavi et al., 2023). Zeng & Nian (2022) contend that due to the double reduction policy, traditional extracurricular tutoring classes have faced restrictions, creating a pressing challenge for certain families, especially students with lower academic performance. Consequently, these families are compelled to actively seek alternative educational resources. For instance, some struggling students might turn to online mathematics learning applications or engage in community

education programs to bolster their academic skills. However, the accessibility and cost of these alternative resources differ based on geographic location and resource types, mainly influenced by the economic status and residence of students' families. Not all underperforming students can access alternative resources tailored to their specific needs.

Parents' Education Anxiety: Emotional and Blood Ties

Parental educational anxiety stands as a crucial emotional factor influencing family education decisions. Defined by Thakur (2020), it encompasses parents' feelings of nervousness and worry during their children's educational journey, involving concerns about academic performance, social well-being, future careers, educational policies, and competition pressures (Ogbu, 1987). This anxiety often stems from uncertainties in the social and educational environment, exacerbated by shifts in national education policies, causing unease among parents. Notably, the implementation of the double reduction policy has led to varying parental perceptions. While some view it as a relief, reducing academic pressure and competition, others fear a decline in education quality and competitiveness, exacerbated by policy instability.

In our study, we focus on understanding the impact of China's double reduction policy on parental education anxiety and its connection to the availability of alternative educational resources. We are particularly intrigued by how family economic status shapes parental attitudes toward the policy. Our research delves into whether parents are aware of and have access to these alternatives, exploring how this awareness influences their education-related anxiety. To address these inquiries, we have formulated five research hypotheses, aiming for a comprehensive exploration of this complex issue.

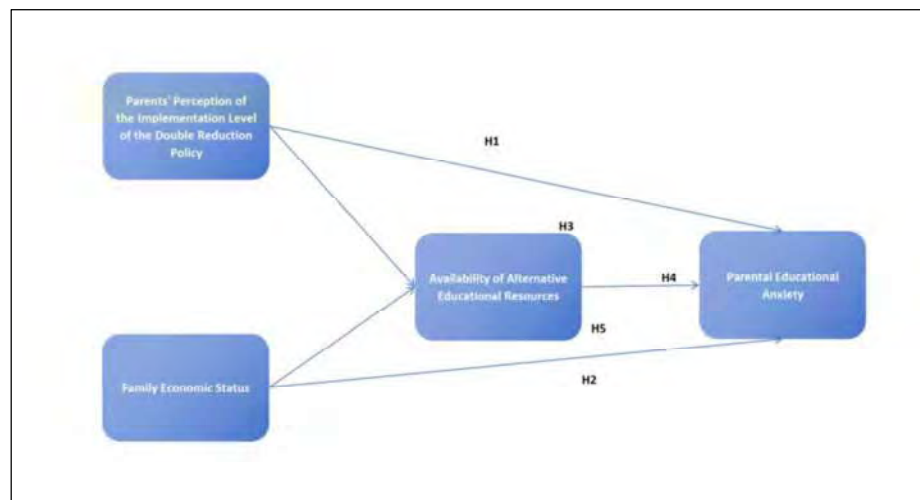


Figure 1. The overall framework.

3.0 Theoretical Background

This study draws on Maslow's hierarchy of needs theory and Weiner's attribution theory as foundational frameworks. Maslow's theory posits five levels of needs, ranging from physiological to self-actualization, indicating that individuals pursue higher-level needs once lower-level ones are fulfilled, shaping human motivation and satisfaction. This concept has significantly influenced personal development and well-being. Weiner's attribution theory, on the other hand, delves into how people attribute motives to others' behaviors, shedding light on the cognitive processes impacting attitudes, emotions, and social interactions.

In the context of parental education anxiety, educational competition, equity, and policy concerns, these theories offer valuable insights. Maslow's hierarchy of needs theory underscores diverse individual needs, including safety, social belonging, and esteem, relevant to parental anxiety about their children's future, safety, and social standing. Meanwhile, educational competition may arise from an intense pursuit of esteem needs. Weiner's theory helps unravel the reasons behind parents' behaviors and attitudes in education, providing a framework to understand their perceptions of their children's educational outcomes.

By integrating these theories, this study aims to deepen our understanding of parental education anxiety, dissect the roots of educational competition, and provide guidance to promote educational equity and refine education policies. This research framework enables an exploration of how parental education anxiety and educational competition impact educational equity, offering recommendations to enhance policies and foster a more just and beneficial educational environment.

4.0 Implication

This study first contributes to theoretical research in educational psychology and educational sociology, particularly in areas concerning parental educational anxiety and educational policy. Secondly, it sheds light on parental educational anxiety within the context of the double reduction education policy, emphasizing critical perspectives on this policy. Additionally, the research offers recommendations to various stakeholders in the education field, including parents, teachers, students, schools, and educational leaders. These recommendations are applicable across all nations.

5.0 Future Work

A specific measuring tool will be employed to measure a single variable. The classification of family assets may be based on two criteria: one related to China's household income and social class divisions, and the other following the relevant standards outlined by the United Nations.

6.0 Conclusion

Indeed, we acknowledge the crucial role that the double reduction policy plays in alleviating parental anxiety and reducing social competition (Zhang et al., 2023; KANG et al., 2022). However, policy formulation and implementation should not stop here; there should be an ongoing monitoring and feedback mechanism in place, with particular attention paid to listening to parents' feedback and opinions. Most importantly, educational policies should have the core objective of serving the general public rather than merely managing society. Furthermore, policymakers should not overlook the ever-evolving nature of society and should adopt more flexible approaches, avoiding one-size-fits-all policy implementations.

Policies should take into account the diverse social strata, varying income levels, and disparities in educational resources within society. Additionally, attention should be given to the distribution of alternative resources, allowing for timely adjustments to policies to better cater to the diversity of societal needs. In conclusion, this is not a critique of the double reduction policy but rather an emphasis on the need for policies to closely align with real-world conditions to better meet the needs of all segments of society.

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Exploring the Influence of AI Tools on Critical Thinking and Problem-Solving through an Optimized Workflow in Academic Research Environments

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Abstract

The accelerated advancement of artificial intelligence (AI) tools, particularly conversational generators such as ChatGPT, has markedly enhanced productivity within the academic research milieu. Nonetheless, this dependency could impede the cultivation of critical thinking and problem-solving competencies among academic researchers, especially students. This investigation delineates the repercussions of AI tools on students' critical thinking and problem-solving aptitudes in academic research, employing a mixed-methods analysis encompassing surveys and interviews. The results of the study showed that while the AI tool improved research efficiency in most of the research steps, the impact in the process of literature finding and critical review was negative. Furthermore, this study describes an innovative workflow to optimize the use of AI tools in different research phases to promote critical thinking and problem solving. This study not only promotes practical strategies for researchers, but also facilitates the evolutionary iteration of AI tools, laying the foundation for future AI research.

Keywords: *critical thinking, problem solving; artificial intelligence; academic research*

1.0 Introduction

The development of modern civilization has been greatly accelerated with the support of computer technology (Issayeva et al., 2016), leading to profound impacts on both the economic development of society and the lives of its citizens (Palvia et al., 2018). Particularly, the advancement of artificial intelligence (AI) technology has significantly enhanced social productivity and efficiency (Liu et al., 2023; Goralski & Tan, 2020). AI finds extensive applications within educational settings, enabling educational institutions to implement intelligent personalized education more effectively (Dogan et al., 2023). Additionally, AI-powered virtual chatbots can provide students with question-answering and tutoring services, assisting them in comprehending and resolving academic issues.

Academic research stands as one of the most crucial activities in higher education. In recent years, the application of artificial intelligence tools within academic research settings has become a focal point of scholars' investigations (Crowe et al., 2017; Razack et al., 2021). While artificial intelligence offers significant opportunities for supporting teaching and academic research, its application in academic contexts also presents numerous challenges and drawbacks. On the one hand, the current state of development of AI tools still possesses several limitations, such as the need for improvement in terms of accuracy (Ram & Verma, 2023). On the other hand, an excessive reliance on artificial intelligence tools can restrict students' capacity for critical thinking and skill development (Tuhtaboevich, 2023), potentially leading to academic misconduct and other adverse consequences.

In reality, academic research constitutes a complex and systematic endeavor (Russell, 2023). Critical thinking and problem-solving abilities stand as pivotal factors in conducting high-quality academic research (Mataniari et al., 2020). They assist researchers in achieving success in theoretical construction, experimental design, and data interpretation (Pan & Zhang, 2021), while ensuring the credibility and applicability of the research (Pally, 2001). Consequently, the effective integration of artificial intelligence tools into academic research, with the aim of enhancing researchers' critical thinking and problem-solving skills, holds the promise of driving industrial innovation and societal development through academic research (Dwivedi et al., 2021). This has long been a goal that researchers are striving to achieve.

Despite some attempts to explore the relationship between artificial intelligence and critical thinking and problem-solving abilities (Abdelaal et al., 2019; Cotton et al., 2023), existing researches still have limitations. Firstly, most current research primarily examines the application of AI tools from the perspective of computer technology development (Chen et al., 2020), overlooking the subjective agency and self-critical and self-optimizing aspects of human beings. Secondly, existing research neglects the holistic and systemic nature of academic research (Kühnen & Hahn, 2018). Finally, the methods employed in current research are often overly singular, unable to precisely uncover the underlying reasons and the genuine experiences of users.

These limitations not only hinder our deeper understanding of AI tools but also impede the future enhancement and development of such tools. Therefore, the aim of this research is to determine the impact of current levels of AI tools on critical thinking and problem-solving abilities in various processes within academic research settings. This will aid scholars in gaining a more comprehensive understanding of the strengths and weaknesses of AI tools and enable their efficient application across different processes within academic research settings. Based on this, the research questions for this study are as follows:

RQ1: What is the frequency and proficiency level of the use of AI tools by university students in academic research?

RQ2: What is the current level of critical thinking and problem-solving abilities among university students in academic research?

RQ3: What are the impacts and challenges of AI tools at different stages of academic research on critical thinking and problem-solving abilities?

RQ4: How do researchers currently effectively and accurately utilize AI tools to enhance critical thinking and problem-solving abilities in academic research settings?

2.0 Methodology

The research methodology for this study is a mixed-methods approach, combining both quantitative and qualitative research. Initially, a questionnaire survey is conducted to gauge the frequency and proficiency levels of AI tool usage among researchers, as well as their current levels of critical thinking and problem-solving abilities in the context of academic research. This phase aims to establish how AI tools impact critical thinking and problem-solving abilities at different stages of academic research. Subsequently, semi-structured interviews are conducted to gain a deeper understanding of how AI tools influence critical thinking and problem-solving abilities. Finally, based on the results of the mixed-methods research, an attempt is made to summarize the role and definition of AI tools and construct a future AI academic workflow.

The study population for this research consists of 154 university students at a university in China. Data collection is carried out through an online survey platform, using a simple random sampling method. Subsequently, based on the inclinations identified in the survey, 8 university students

voluntarily participated in semi-structured interviews. The research tools used in this study include a questionnaire survey focusing on the impact of AI tools on critical thinking and problem-solving abilities at various stages of academic research for undergraduate students.

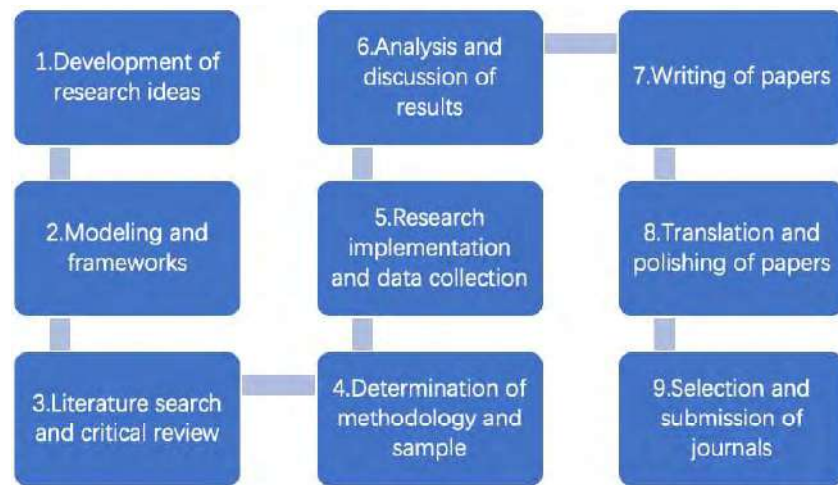


Figure 1. The 3 Processes and 9 Steps of Academic Research

This tool is divided into three sections, the first section gathers basic information about the respondents, including gender, nationality, educational background, field of study, native language, academic publication experience, frequency of AI tool usage, and proficiency levels. The second section comprises questions related to 9 steps in academic research as the Figure 1 shown, each assessed using a 5-point Likert scale. For example, for the step of literature search and critical review:

- I can complete research-related literature searches.
- I can critically review literature based on what I have found.
- AI tools help me effectively with research-related literature searches.
- AI tools help me effectively with the critical review based on what I have found.

The third section assesses whether respondents are willing to participate in further semi-structured interviews, providing a qualitative dimension to the study. Data collected from the survey were subjected to descriptive statistics using SPSS 26.0 software for quantitative analysis. Content analysis was employed for the qualitative analysis, allowing for a thorough examination of the interview data. This mixed-methods approach enables a comprehensive investigation into the research questions and provides a balanced perspective on the subject.

3.0 Results and Discussion

What is the frequency and proficiency level of the use of AI tools by university students in academic research?

The results indicate that approximately half (47.1%) of the respondents reported using artificial intelligence tools in their academic research, with 18.71% stating that they use them frequently. Only 11.61% of the respondents reported minimal or no experience with using AI tools in academic research. Furthermore, the results reveal that 42.58% of the respondents, while having some skills, frequently use AI tools in academic research, while 25.16% of the respondents reported both proficiency and frequent use. Only 15.48% of the respondents indicated that they were neither proficient nor frequent users. These findings further underscore the high frequency

of AI tool usage in academic research, but only a quarter of the users are proficient.

What is the current level of critical thinking and problem-solving abilities among university students in academic research?

The results indicate that university students scored below the overall average (3.895) in problem-solving abilities during the processes of constructing research models and frameworks, translating and proofreading research papers, and selecting and submitting to academic journals. Their scores were above the overall average for the remaining processes. Furthermore, the results also show that university students scored below the overall average (3.896) in critical thinking during the processes of determining research methods and samples, analyzing and discussing research results, and selecting and submitting to academic journals, while their scores were above the overall average in the remaining processes.

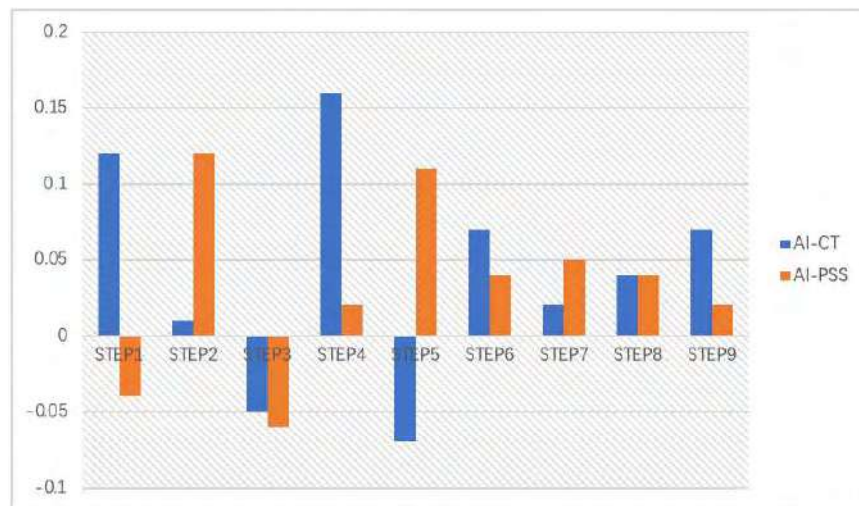


Figure 2. Impact of Artificial Intelligence Tools on Critical Thinking and Problem-Solving Skills

What are the impacts and challenges of AI tools at different stages of academic research on critical thinking and problem-solving abilities?

The data results shown in Figure 2 revealed that artificial intelligence tools do not effectively assist users in generating research ideas, and the smallest difference in scores was observed in the processes of literature search and critical review (-0.06). The interview results suggest that AI tools are beneficial for expanding thinking and breaking through established knowledge systems, especially in interdisciplinary research projects and complex research methods. However, AI tools do not seem intelligent in literature search and retrieval, and overreliance on them can hinder the development of critical thinking and problem-solving abilities. Instead, they should be viewed as academic mentors rather than a replacement for human cognitive capabilities.

How do researchers currently effectively and accurately utilize AI tools to enhance critical thinking and problem-solving abilities in academic research settings?

Based on the mixed research findings, the researchers have attempted to develop a workflow tailored for academic researchers. This workflow involves that **AI tools for framework construction—manual literature search—human screening and matching—manual critical review—AI-powered proofreading.**

In such a workflow, human critical thinking is maximally utilized to address the limitations of AI tools in literature search, which can result from technological barriers and other factors. This

approach combines the advantages of AI in streamlining processes with the strengths of human critical thinking and problem-solving to enhance the quality and efficiency of academic research. Furthermore, this workflow specifically defines the role of AI tools in academic research settings as an all-encompassing academic and skill-based coach available round the clock.

4.0 Conclusion

This mixed-methods research contributes to enriching the theoretical understanding of how artificial intelligence tools impact critical thinking and problem-solving abilities in academic research. Notably, this study innovatively dissects and analyzes the influence of AI tools on each step of the academic research process, providing a detailed examination of their effects at each stage. Further, the proposed AI tool workflow and role definition introduced in this study are poised to aid researchers in effectively harnessing the positive aspects of AI tools in practical academic research. This research offers valuable insights into the intricate interplay between human intellect and AI in the academic research domain, paving the way for more informed and productive use of AI tools in academic research.

However, this research also has limitations. First, the study did not measure and assess different dimensions of critical thinking and problem-solving skills in depth, limiting in-depth quantitative analysis. Second, the study did not compare samples with different educational backgrounds and academic publication experiences, thus failing to reveal the impact of AI tools on different groups. In addition, the use of AI tools is a broader concept that is difficult to accurately quantify, and more relevant variables can be introduced in future studies. Finally, the study population was limited to undergraduate students, most of whom had no publication experience and failed to represent the main body of academic research. Future studies should expand the sample range to obtain more comprehensive results.

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Effectiveness Of Cognitive Bias Modification on Social Problem Solving Based on Interpersonal Self-Supporting Personality Theory Among Chinese College Students

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Abstract

In the context of the 14th Five-Year Plan, China has proposed its first medium- and long-term strategic plan with the theme of education modernization, and students' practical abilities and problem-solving abilities are highly emphasized. Chinese college students' interpersonal relationships in school, employment delays after graduation, and ability gaps at work are all related to solving practical problems, especially social problem-solving (MyCOS Institute et al., 2023). Social problem-solving includes two aspects: motivation and skills (D'Zurilla & Nezu, 2007).

Keywords: *cognitive bias, social problem solving, interpersonal self-supporting personality theory*

1.0 Introduction

Studies have shown that Chinese undergraduates' social problem-solving motivation and skills have not reached the expected level (Wang, 2009). Personality is an important aspect that affects the solution of social problems (D'Zurilla et al., 2011). Interpersonal self-supporting personality is a positive personality emphasized by traditional Chinese culture and personal self-supporting together form a self-supporting personality (Xia & Huang, 2006a). Research shows that interpersonal self-supporting personality positively predicts everyday practical problem-solving, especially interpersonal-related problems (Xia et al., 2011). Individuals with low levels of interpersonal self-supporting personality will have attentional preferences for negative interpersonal information (Zhang & Xia, 2015). Negative emotional information will lead to coherent cognitive biases, including attention biases and interpretation biases, in individuals with affective disorders such as anxiety and depression (Kant et al., 1997; Nezu & D'Zurilla, 1989; Ranjbar et al., 2013; Siu & Shek, 2009), thereby affecting their social problem-solving (Zeng, 2018). In summary, interpersonal self-supporting personality negatively predicts cognitive biases and positively predicts social problem-solving, and cognitive biases negatively predict social problem solving.

Therefore, this study aims to explore the effectiveness of cognitive bias modification training in improving social problem-solving among Chinese college students under the Interpersonal Self-Supporting Personality Theory. This research included two studies. Study 1 contains two hypotheses. Hypothesis 1 is that off-line cognitive bias plays a mediating role in the impact of interpersonal self-supporting personality on social problem-solving. Hypothesis 2 is that individuals with a high interpersonal self-supporting personality have low cognitive biases and high social problem-solving, whereas individuals with a low interpersonal self-supporting personality have high cognitive biases and low social problem-solving. A survey of 300 Chinese undergraduates will be carried out through questionnaires and experimental methods, and interpersonal self-supporting personality, social problem-solving, and off-line attention bias will

be measured through the following questionnaires: ISS from the Self-Supporting Personality Scale for Adolescent Students (Xia & Huang, 2008), the Social Problem-Solving Inventory-Revised Chinese version (Wang, 2009), and the Attention to Positive and Negative Information Scale (Lv et al., 2016). Measuring off-line interpretation bias via a self-administered questionnaire based on a previous study (Xu, 2010). Select individuals who are willing to continue participating in the experiment to come to the laboratory, and measure the individuals' online attention bias and online interpretation bias through the E-Prime experimental design. Pearson correlation analysis and regression analysis were used to determine the relationship between interpersonal self-supporting personality and cognitive biases, including off-line attention and interpretation bias.

A multivariate analysis of variance was used to determine individual cognitive biases and social problem-solving levels under high and low levels of interpersonal self-supporting personality. Study 2 is about cognitive bias modification training. It is hypothesized that individuals with low levels of interpersonal self-supporting personality can reduce the level of cognitive biases through CBM training, thereby improving social problem solving. Among the individuals in Study 1, low-interpersonal self-supporting personality individuals who were willing to participate in the experiment were selected, and CBM training was conducted seven days a week. A questionnaire test was conducted on the 4th day, the 7th day of the experiment, and the 7th day after the training to measure off-line attention, interpretation bias, and social problem-solving. The measurement tools are the same as in the study. At the same time, E-prime is used to measure online attention bias and online interpretation bias. The independent sample t test was used to compare the data in Study 1 with the data on the 4th day, the 7th day, and the 7th day after the training and observe the differences of off-line attention bias, off-line explanation bias, on-line attention bias, and on-line interpretation bias. and the social problem solving at these four points of the timeline.

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Mediating Effect of Self-efficacy between Transformational Leadership and Organizational Citizenship Behavior of Academic Staff: A Conceptual Paper

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Abstract

study attempts to determine levels of transformational leadership, self-efficacy, and organizational citizenship behaviors of academic staff, and more importantly, to investigate the relationship among the variables. In the theoretical context of social cognitive theory, transformational leaders in the environment extend behaviors of care and inspiration, and thus promote confidence in the followers, leading to a higher state of organizational citizenship behaviors. The employees are more likely to repay with more effort devoted. Quantitative research design is employed to examine the relationship between the variables. Structural Equation Modeling (SEM) is adopted to test the mediating effect of self-efficacy. The research findings can give professional advice to leaders and administrators from higher educational institutions in adjusting policies and strategies.

Keywords: *organizational citizenship behaviors; transformational leadership; self-efficacy*

1.0 Introduction

For many years, education has been in a crucial position in most countries, because of its significant role in cultivating talents and advancing research. China is also among the countries that spend a large portion of the yearly budget on supporting the development of education. According to the Ministry of Finance, in the year 2021, the education sector in China received a huge amount of more than RMB 5.787 trillion, increasing 9% over the previous year. From the aspect of higher education, reformation methods and policies are carried out to enhance the development of universities and colleges, in terms of research and innovation, as well as teaching and professional service. The academic staff working in higher educational institutions are the main workforce to realize the goals and missions of the organization. Therefore, being considered as the most valuable resource, the academic staff are gaining higher status and thus need more attention.

However, the workload of the academic staff has been growing with the commencement of multiple reformation measures. For example, in addition to disseminating knowledge, lecturers are also expected to engage in tasks of administrative affairs and work extra hours to prepare for everything involved in their professions (Johari et al., 2018). Scholars have found that academic staff are required to devote more time over working hours to do research and equip their teaching practice with the research findings and experience (Basarudin et al., 2016). These additional efforts can hardly be categorized into the academic employees' formal job duties, but still contribute to the success of the organization. The so-called organizational citizenship behaviors (OCBs) are such working activities that are performed by the employees and should be promoted by the leaders in higher educational institutions.

It is natural to infer that employees with higher levels of OCBs are more likely to be favored by employers. In order to achieve success and sustain the competitive advantage of the organizations in the industry, employers in turn need to seek for more ways to improve OCBs of the employees. For example, research on corporate social responsibility shows that CSR can positively predict organizational citizenship through the partial mediating effect of organizational identification (Li & Chen, 2023). Although past research attempts have looked into the influencing factors of OCBs, limited studies have emphasized the effect of self-efficacy (SE) in the relationship between transformational leadership (TL) and OCBs among lecturers in the context of higher educational institutions. Therefore, the purpose of this research is to identify the impact of TL on OCBs, with the mediating role played by SE among lecturers.

2.0 Literature review

Generally, organizational citizenship behavior has been defined as employee behaviors that are discretionary and usually not formally rewarded. But this kind of behaviors still can provide support and contribution to the effectiveness of the organization (Organ, 1988; Jimmieson et al., 2010). Past evidence and experience in literature have demonstrated that the concept of OCB consists of two basic dimensions, which have further developed five categories, namely altruism, conscientiousness, courtesy, civic virtue, and sportsmanship (Organ et al., 2005; Podsakoff et al., 1990). Altruism refers to the willingness and behaviors of helping others. Conscientiousness emphasizes the efficiency of the people and their group. Courtesy is appropriate information conveyed through communication. Civic virtue shows the virtue of voluntarily serving and attending activities in the organization. Employees exhibit sportsmanship when they avoid complaining and whining (Organ, 1988).

In most circumstances, the interactive relationship between supervisors and subordinates has attracted the attention of research. With a paradigm of transformational leadership, Bass explains that subordinate competence could be developed further as a consequence of the transformational leader's nurturance and vision (Bass, 1985). The employees are thus motivated to not only dedicate much energy to the normal goals of the organization, but also are more likely to devote additional efforts that exceed expectations (Lai et al., 2020). According to past literature, transformational leadership is defined as the capability of the leaders to lead and motivate the followers toward the organizational goals over their own self-interest. There are four dimensions that demonstrate the concept of transformational leadership: 1) idealized influence, 2) inspirational motivation, 3) intellectual stimulation, and 4) individualized consideration.

Idealized influence portrays a transformational leader who leads the group by example (Lim and Ployhart, 2014). In other words, transformational leaders show the group their determination to realize their goals through charisma (Afshari, 2022). Inspirational motivation is considered the leader's competence to express a vision (Shin & Zhou, 2003), and the degree to which the leader can motivate the employees (Saira et al., 2021). Intellectual stimulation emphasizes that a transformational leader is able to assess the current situation of the organization and encourage novel ideas for the organizational tasks and creative solutions to problems (Bass, 1997). Individual consideration is the circumstance under which the transformational leader is more like a coach or mentor, focusing on the followers' individual needs for development (Bass et al., 2003).

In addition to a leader's transformational leadership, such factors as the employees' personal characteristics are also influencing the followers' behaviors (Buil et al., 2019). Self-efficacy has attracted increasing attention among personal characteristics. Self-efficacy is about individuals' belief of their own ability to successfully accomplish some certain task, or tasks (Bandura, 1986). Therefore, SE ensures people perform tasks confidently and effectively (Carter, et al., 2018). It is proved by previous studies that SE can influence OCBs. In addition to direct influence, SE has also been found to have indirect influence on OCB through several different

elements (Na-Nan et al., 2021).

Past evidence has laid the foundation for the establishment of the relationship between transformational leadership, self-efficacy, and organizational citizenship behavior. Koo and Lee (2021) investigate in the possible ways to influence Machiavellianism employee's OCB by means of TL. The findings reveal that, in order to lead employees high in Machiavellianism towards a pro-organizational direction, the administrator should adopt group-focused TL. Previous studies have shown interest in the relationship of how TL influences several leadership outcomes, and the role played by SE in the relationship. Demir (2020) helps with the confirmation of OCB being influenced by self-efficacy in the context of education. Research attention has also been paid to indirect relationships through SE between TL and other variables such as innovative work behavior among nurses (Afsar & Masood, 2018) and employees' intention to support organizational change (Bayraktar & Jiménez, 2020). However, there is still a gap in highlighting the role played by SE in the path where TL influences OCBs among lecturers in the context of higher education. Therefore, with the research framework suggested in Figure 1, this study aims to examine the relationship between TL towards OCB, with an explanation of the effect of SE.

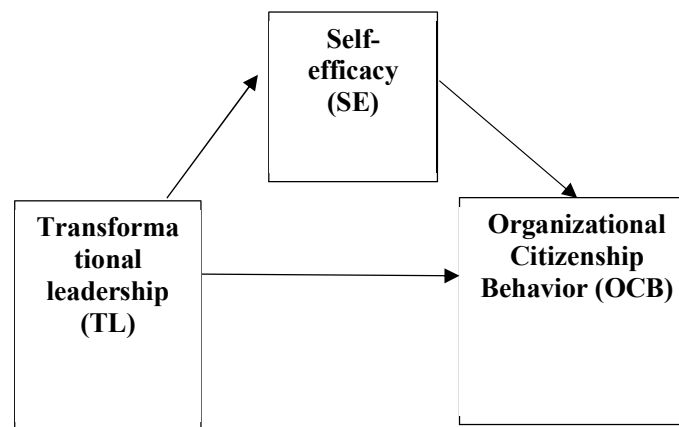


Figure 1. The research framework of this study

A key paradigm that addresses the social relationship in people-oriented organizations is the Social Exchange Theory. Homans (1958) contends that people build relations depending on their own analysis of cost and benefit. Thus, those actions that have been rewarded in the past are more likely to be repeated (Homans, 1958). According to Blau (1964), by means of giving valuable gifts or services, a person can make a claim for status superior to the receiver. The process of social exchange usually begins when a supervisor acts positively or negatively towards a target individual. Figure 2 shows the positive actions and repays. Then the target individual in turn reciprocates this action with their own behaviors (good or bad). Therefore, when the followers feel care and support from the leader, they become more committed to the leader (Fear et al., 2018), and thus more extra efforts to repay benefits are expected.

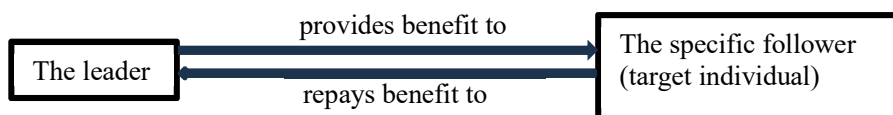


Figure 2. The general process of social exchange

Literature has laid the foundation for the connection between TL and OCB. However, there

are relatively few studies specifically focusing on the effect of SE mediating the connection. That makes what this study trying to investigate matter. With SE working as the mediator, the relationship between TL and OCB of lecturers is reviewed and examined closely under the paradigm of social exchange theory.

3.0 Methodology

Since the main purpose is to test the mediation effect of SE in the relationship between TL and OCB among lecturers in China, it is preferable to adopt a quantitative research design. The process through data collection until the final analysis is suitable to help examine and explain the relationships among the variables. Pearson Product Moment Correlation is used to determine whether there is a significant relationship between the independent variable (TL), the mediator (SE), and the dependent variable (OCB). In addition, Structural Equation Modeling (SEM) is applied to closely examine the prediction of OCB from the independent scores, including SE. The mediating effect of SE in enhancing the relationship between TL and OCB is also tested through SEM, using Bootstrap technique. All these techniques are performed to seek for more accurate explanation of the multi-variate relationships in this study.

The data collection process of this study is mainly realized by means of a questionnaire. All of the questions are answered by the respondents based on their own perceptions. This method of self-rated survey is welcome by researchers because of its objectivity and independence. In addition to electronic questionnaires, in this study, questionnaires printed on paper are also used to help with the collection of data.

4.0 Future work

This study attempts to reveal the relationship between TL and OCBs of academic staff in higher educational institutions. It is hoped to confirm the optimal role played by SE to cause positive change in the configuration of TL influencing lecturers' OCBs. With sufficient conditions, the results of this study can help with the development of further studies into OCB and the factors influencing it. Future research may also look into the moderating role of other variables in this relationship. Other outcome variables, such as commitment and goals, are also worthy of analysis.

5.0 Conclusion

Since the research is conducted among academic staff in higher educational institutions and they can be seen as employees with high tenure and intelligence, the generalizability of the results might be hindered. Future research conducted in other working contexts could be of help with backing up and strengthening the findings of this study. The main contribution of this study is to report the direct influence of TL on employees' OCBs and the combined effect with the mediator of SE in higher educational institutions. In light of the social exchange theory, it is advisable that the leaders and the administrators offer the lecturers more support in order to achieve the effectiveness and success of the organization through promoting the OCBs of their academic staff.

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Perspective and Expectations of Employers in the Multimedia Industry Towards Technical and Vocational Educational and Training (TVET) Student's Problem-Solving Skills

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Abstract

Soft skills play an essential role in the career growth of an employee. Problem-solving skill is one of the skills that employers demand in every staff they hire. Practically, graduates from TVET have already mastered the technical skills for specific jobs, thus giving them advantages over non-TVET student's employability. However, the TVET student may or may not have problem-solving skills due to the nature of their education, where they learn and do the "job" in educational facilities or institutions. This concept paper aims to study the perspective of employers in the Multimedia Industry in Malaysia towards the TVET student's problem-solving skills during their internship. This qualitative study will involve two persons: the business owner of the multimedia company's internship program. The findings will help the understanding of TVET students' problem-solving skills and competencies and later be improved for their career progress. It also will help teachers to teach these skills more comprehensively.

Keywords: *problem-solving, employer perspective, soft skills competencies*

1.0 Introduction

Employers hire experienced workers rather than graduates because they value working consistency and perceive that they may be more competent and committed (Pedulla, 2016). However, hiring experienced workers costs much more than fresh graduate students. From employers' perspective, hiring new workers is a common practice for many companies. Thus, they require the best talent they can get, so the best way is to hire people with multiple skills, not just technical skills but also other soft skills that can add value to the companies (Carnevale & Smith, 2013). Some employers also prefer to hire staff with a balance between academic knowledge qualification and soft skills competencies (Puad & Desa, 2020). Employers tend to assess their potential employees during the interview process to see if the candidate has what it takes to be hired into the company. Usually, there is no holistic measurement of the candidate's potential during the interview. The only finding that the employers could get was from the interviewing process. Therefore, communication skills are essential during this process (Meng, 2022). Even though the candidate has high competency in technical skills, employers are rarely able to impress if the candidate cannot justify or explain it without showing the evidence. It shows that communication skills and other soft skills related to employment will give advantages to potential employees.

The problem-solving skills are one of the most essential soft skills employers require (Chhinzer & Russo, 2018; Shola, et al., 2019). According to (Finch et al., 2013), soft skills are differentiated from problem-solving skills. Soft skills are constructed as communication and interpersonal skills, while problem-solving skills are constructed as critical and creative thinking skills, leadership skills, and adaptability. However, both soft skills and problem-solving remain

essential for employers.

Solving problems remains crucial in a working environment. It is a skill that employees should have so that employers can rely on their workers to solve any problem that can be easily solved depending on the job description and responsibility when issues arise. Without these skills, employees will be too dependent on their employers, which will not help them grow in their future careers.

2.0 Problem Statement

Students in TVET education typically learn about knowledge and skills related to the job. The principle of the TVET education curriculum is to develop students' skills and knowledge so they can work at a specific job after finishing school (Miller, 1985). Therefore, TVET students have mastered the skills and knowledge of the job, thus giving them advantages to be employed by employers. Students develop their soft skills, such as communication, problem-solving, interpersonal skills, and many other soft skills throughout their education years either through the courses they enroll (Yao & Tuliao, 2019; Teng et al., 2019; Dogara et al., 2019) or the programs or activities they participate (Feraco et al., 2021; Wang et al., 2022).

Although they learn soft skills during their educational years, many employers believe that there is a gap in perception of how these TVET students perceive soft skills compared to employer's expectations and perceptions towards the TVET students (Seetha, 2014; Collet et al., 2015; Aryanti & Adhariani, 2020; Yong & Ling, 2023). A study by Hämäläinen (2015) showed that two-thirds of adult TVET students lack or have weak problem-solving skills in technological working environments. World Bank also reported that Malaysian companies have difficulties sourcing talents with good soft skills, including problem-solving abilities (Omar et al., 2023).

3.0 Purpose of study

This qualitative research design study aims to explore the expectations of employers or business owners of multimedia companies towards the problem-solving skills of TVET students. Specifically, the study aims to:

1. Investigate problem-solving skills that employers or business owners expect from TVET students in the multimedia industry.
2. Identify any gaps or discrepancies between employers' expectations and the actual problem-solving skills of TVET students and propose recommendations for bridging these gaps.
3. Understand the employer's satisfaction with employees' problem-solving skills with TVET education.

This study aims to comprehensively understand employers' expectations towards the problem-solving skills of TVET students in the multimedia industry by employing a qualitative research design. The findings will enhance TVET education programs and curriculum development, ensuring that they align with the needs and expectations of employers in the field.

4.0 Theoretical Overview

This study's theoretical framework will be based on the Expectation-Confirmation Theory (ECT). The ECT posits that individuals' satisfaction with a product or service is influenced by the confirmation or disconfirmation of their initial expectations (Sinha et al., 2019). In the context of employers' expectations towards the problem-solving skills of TVET students, the ECT can provide valuable insights into how employers' initial expectations are formed, how they are

confirmed or disconfirmed by the students' problem-solving skills, and how this confirmation or disconfirmation affects employers' satisfaction. By applying the ECT, this study aims to understand the role of employers' expectations in shaping their perceptions of TVET students' problem-solving skills and their overall satisfaction with these skills.

5.0 Research Methodologies

This study employed a qualitative research design, specifically a case study approach, to explore the perspectives of two owners of multimedia companies regarding the problem-solving skills of TVET students. The participants were selected based on their expertise and experience in the multimedia industry. Semi-structured interviews were conducted to gather rich and in-depth data on the employers' perceptions of TVET students' problem-solving skills. The interviews were audio-recorded and transcribed for analysis. The data will be analyzed using thematic analysis to identify common themes and patterns in the data. The findings will provide insights into the employers' perspectives on the problem-solving skills of TVET students.

6.0 Interview Protocol

The interview protocol will have three phases, starting with the introduction phase, followed by the main research construct, and closing section. The introduction phase asked participants about their backgrounds of the participants, the businesses they venture and their experiences with TVET students.

- Introduction
 - i. Begin by introducing yourself and the purpose of the research and assuring the participants that the interview will be voluntary and that the response will be confidential.
 - ii. Asking the participants about their information and business background
- The research construct.
 - i. What are the expectations of employers regarding TVET students who work or intern in their company?
 - ii. What is the gap that employers see between their expectations and the experience of student problem-solving skills related to the student's job description?
 - iii. How do the employers measure their expectations, and what factors influence them?
 - iv. What experiences does the employer have regarding TVET student's problem-solving skills?
 - v. How is overall satisfaction toward TVET student performances regarding their problem-solving skills.
- The closing
 - i. Thanks to the participants for their time and insight toward the research.
 - ii. Offer opportunities for the participants to ask questions regarding the research.

7.0 Propose Contribution

The study on employers' expectations towards TVET students' problem-solving skills will contribute in many aspects. Firstly, it will provide a valuable understanding of the TVET student's problem-solving skills in the multimedia industry from the perspective of employers (Wang et al., 2003). This information can be used to inform TVET education programs and curriculum development, ensuring that they align with the needs and expectations of employers. It also

Secondly, the study will explore how employers' expectations are formed and how they may differ from the actual problem-solving skills demonstrated by TVET students (Sinha et al., 2019). This understanding can help bridge any gaps or discrepancies between the skills possessed

by TVET students and employers' expectations thus improving and aligning between the two parties.

Lastly, the study will examine the impact of employers' expectations on their satisfaction with TVET students' problem-solving skills and their overall evaluation of these skills (Sinha et al., 2019). This insight can inform strategies to enhance employers' satisfaction and ensure that TVET students are adequately prepared to meet the industry's expectations.

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Science Student Teachers' Perceptions Regarding the Hybrid Approach of Theocentric Worldview of Education for Sustainable Development (ESD) and Outdoor Environmental Education

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Abstract

This study investigates the integration of theocentric (Islamic) worldview of Education for Sustainable Development (ESD) and outdoor environmental education as an alternative and holistic approach to implement the sustainability curriculum in order to produce students who are more environmentally literate. The topic is explored from the perspective of Sciences student teachers in regards to the efficacy and practicality of the integrated approach in their teaching practice. Twenty final year undergraduate, Muslim students studying to become Science teachers participate together in a program that offers the hybrid approach. Based on the literature review, the findings are expected to indicate a positive influence of the approach on students' environmental literacy. The results of these findings will also provide an insight into the efficacy and practicality of the integrated approach in their teaching practice. This research can provide valuable information regarding teacher preparation courses in the Malaysian college of education. By tailoring ESD to fit into the Malaysian religious context, it could serve as one of the practical strategies to push for an effective ESD implementation.

Keywords: *theocentric; Education for Sustainable Development (ESD); outdoor learning*

1.0 Introduction

Despite the increasing trend on the effort to improve students' achievement in the cognitive domain regarding the subject of environmental education, there is still a huge disconnect between students' environmental knowledge and their environmentally-friendly attitudes and behavior (Abidin et al., 2022; Ilham et al., 2022; Karim et al., 2022; Asis et al., 2021; Rodzi et al., 2019). One of the prominent factors contributing to the issue of ineffective implementation of Education for Sustainable Development (ESD) is the lack of critical reflection involving ethical values and principles when addressing the ethical, political, relational and scale dimensions of the issue that had contributed to the climate crisis (Huckle and Wals, 2015). Therefore, this research proposes to explore the integration of theocentric worldview of ESD and outdoor environmental education as an alternative and holistic approach to implement the sustainability curriculum in order to produce students who are more environmentally responsible. Despite Malaysia being a country with strong religious affiliations, there is a lack of research that has been done to explore theocentric environmental ethics in terms of its implementation and effectiveness in educational context. This study explores the topic from the perspective of Sciences student teachers in regards to the efficacy and practicality of the integrated approach in their teaching practice. In this study, the researcher applies qualitative methods to answer the following questions:

- How do science student teachers perceive the hybrid approach of theocentric worldview of ESD and outdoor environmental education?
- How do the science student teachers perceive their own self efficacy to apply the hybrid approach in their own teaching?

2.0 Theoretical Framework

The researcher integrates the framework of theocentric worldview in ESD that grounds four Islamic environmental ethical concepts namely: 1) the concept of *Tauhid* or Oneness of God, 2) the concept of *Fitra* or Creation, 3) the concept of *Mizan* or Balance, and finally, 4) the concept of *Khalifah* or Responsibility (Muhamad et al., 2021; Khalid, 2010; Ammar, 2001; Setia, 2007). This module is also designed to support the curriculum on biodiversity and ecosystem topics using the outdoor experiential learning approach that encompasses four aspects of environmental literacy including (1) knowledge, (2) skills, (3) behavior, and (4) motivation or attitude (hope) to solve current and future problems (North American Association for Environmental Education, 2011a, 2011b). To get student teachers' perspectives on their own self efficacy to apply the hybrid approach in their own teaching, the researcher built on Bandura's Theory of Self Efficacy (1987) that identified four different sources of self-efficacy which consists of: (1) mastery experience; (2) vicarious learning; (3) social persuasion; and (4) emotional and physiological state.

3.0 Methodologies

3.1 Research Design

A qualitative descriptive, exploratory case study design is employed in this study because it is able to describe a phenomenon that is locally constituted in the Malaysian context (Silverman, 2011; Syed Abdullah, 2016) and the paradigm fits the research's interest that concerns people's meaning-making as well as their views and experiences (Braun and Clarke, 2013).

3.2 Research Sample and Sampling Process

In this study, research samples are identified by purposive sampling; where the specific characteristics that exist in a certain segment of a population is known by the researcher (Baumgartner et al., 2022). This technique is chosen because selecting this specific group of participants could best answer the research questions. The sample in this study was selected based on the following criteria:

Final year undergraduate students studying to become Science teachers.
Participating together in the program that offers the hybrid approach.

3.3 Data collection technique

In order to provide a learning experience about diversity and ecosystem in the natural setting based on the theocentric worldview, a one-day outdoor program is designed based on the EnvironMentor module that serves as a guide for teachers as implementers of outdoor environmental education to teach about biodiversity and ecosystem in the natural setting. The four main activities include:

Ecosystem tag game, Biodiversity Index, Jungle trekking and Nature's Harmony.

The researcher will employ triangulation of data sources by using:
document analysis method for the participants' completed reflection questionnaires at the end of each activity.

photo elicitation focus group discussion four days after the program implementation.

3.4 Statistical analysis

Thematic analysis will be employed on the questionnaires and focus group transcriptions. This inductive approach entails getting familiarized with the transcript, generating initial well-defined codes that fit logically within a larger coding framework, analyzing, combining and comparing and graphically mapping the cross-connections between codes, reviewing themes to ensure proper fit, defining and naming themes as well as writing up the final analysis.

4.0 Significance and contribution of research

This study is based on the need to improve the quality of implementation of Education for Sustainable Development (ESD) in our country. Even though fostering values is a crucial aspect within ESD, recent international findings suggested that this aspect is often overlooked (Jordan, 2023). Malaysia, being a country with the majority of the people holding religious values and ethical principles close to their personal identities, tailoring ESD to fit into its social context could serve as one of the practical strategies to push for an effective ESD implementation. This research provides empirical research of such practice that takes place within the realm of outdoor environmental education and from a specific point of view of prospective teachers as the implementers of this approach. Insights from this study will provide prospective teachers with information on the values the integrated approach can bring to their teaching practice. It can also contribute to the literature of both theocentric worldview of ESD and outdoor environmental education by providing the empirical evidence that shows the efficacy of the integrated approach to the students. This research also provides teachers with a voice about the challenges and limitations they may face in carrying out this approach. This will inform important information to the local teacher training programs so curriculum and practice of ESD can be practiced more effectively and holistically. This approach can also potentially be expanded into more topics, subjects and student levels.

5.0 Conclusion

We argue that Science students' teachers should be capable of incorporating the current sustainability curriculum with the theocentric worldview because such a holistic approach is effective in producing more environmentally literate students. When they are able to take away a more complex view of science, scientific thinking and their own values of science. This should make them better teachers who are more understanding of their students' differing opinions.

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Cracking the Code: Unveiling Item Analysis of the ACTIVE Module Assessment Test

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Abstract

Item analysis refers to the procedure of collecting, summarizing, and utilizing data from student responses to evaluate the superiority of test items. Two criteria that help judge the quality multiple-choice and open-ended questions are difficulty and discrimination indexes, with abnormal values indicating poor quality. The test was administered to 37 students, utilising the ANATES4 software to assess the discriminatory and difficulty index and the Cronbach Alpha of the ACTIVE Module assessment test. The findings indicate that the discrimination index for multiple-choice questions in the ACTIVE Module assessment test spans 40 to 80 per cent. In contrast, the value of the difficulty index falls between 20.45 and 73.11 per cent. As a result, the indexes of difficulty and discrimination of each multiple-choice question within this test, designed for assessing the ACTIVE Module, are well-proportioned and equitable. The open-ended questions' discrimination index falls from 31.0 to 34.0 per cent, signifying that each question in the ACTIVE Module assessment test set adequately distinguishes between different performance levels. While the difficulty index range for each open-ended question item falls between 28.50 and 51.00 per cent. This implies that the difficulty associated with the open-ended questions is moderately challenging. The value of Cronbach Alpha was 0.76, which suggests that the items exhibit a high level of reliability and can be effectively utilised in real research scenarios. Overall, the questions appear well-balanced in difficulty, and a Cronbach's Alpha value exceeds 0.60, demonstrating the high reliability for use in the actual research.

Keywords: *Item analysis, difficulty index, discrimination index, assessment test*

1.0 Introduction

Designing questions within a multidisciplinary integrated curriculum is a challenging and time-intensive endeavour. Multiple choice questions (MCQs) and open-ended questions are primarily employed for comprehensive assessments conducted after a semester or academic terms (Mitra et al., 2009; Polat, 2020; Skakun et al., 1979) and offering valuable feedback to educators regarding their instructional strategies (Attali et al., 2016; Merzougui et al., 2021; Sim & Rasiah, 2006). Once a test has been created and assessed, a teacher must gauge the quality of the test questions and their alignment with students' actual performance in the course.

Well-structured multiple-choice and open-ended questions effectively assess higher-order thinking skills in Bloom's taxonomy, such as the ability to interpret, synthesise, and apply knowledge rather than merely the recall of isolated facts. This is possible if the teacher master's the suitable method for developing a question, also known as an item, consisting of a stem and

several alternatives.

Conducting item analysis is a crucial yet straightforward procedure undertaken following a test, which yields valuable information about the reliability and validity of the test items (Lord, 1955; Milton et al., 2011). Item analysis refers to the computation of various statistics for each item on a test. It collects, summarises, and analyses student responses to evaluate test item quality. The ultimate focus of item analysis is to enhance test quality by revising or removing ineffective items. A further significant aspect of item analysis pertains specifically to achievement tests. When this happens, item analysis can help figure out what students have learned and what they have not learned. There are numerous approaches to determining item analysis. The method used to evaluate the effectiveness of a test item is influenced in part by the researcher's preferences and the test's objectives. In addition, it reveals the level of difficulty of the questions, as assessed by the difficulty index, and evaluates whether the questions effectively distinguished between students who performed well and those who did not, as measured by the discrimination index (In'nami & Koizumi, 2009; Lord, 1955; Merzougui et al., 2021).

The difficulty index (p-value), also referred to as the ease index, defines the percentage of students who correctly answered the question. The percentage ranges from 0% to 100%, with higher percentages denoting more straightforward questions. Items with p-values below 30 per cent are regarded as challenging, while those with p-values above 70 per cent are seen as straightforward (Karno To, 1996). In most cases, it is advisable to either place easy questions at the beginning of the test as introductory items or eliminate them entirely. Including difficult items in the test depends upon the teacher's objectives, as they may include them to pinpoint the top performers.

The Discrimination Index (DI), sometimes referred to the Point Biserial Correlation (PBS), measures how effectively an item can differentiate between individuals with lower and higher scores (Mehrens & Lehmann, 1991), and it ranges between -1.00 and +1.00. High-achieving students are expected to choose the correct answer more frequently than their lower-achieving peers. When this is the case, the assessment is considered to possess a positive discrimination index (ranging from 0.00 to +1.00), denoting that students with higher total scores exhibited a greater tendency to select the correct answer for a particular item compared to those with lower overall scores. On the other hand, lower-performing students answered a particular item correctly more frequently than higher-scoring students, so the DI for that item is negative (between -1.00 and 0.00).

Hence, this research aims to analyse the discrimination and difficulty indices associated with the ACTIVE Module assessment test. This analysis stipulates a comprehensive understanding of how well the test differentiates between individuals with varying levels of ability or knowledge (discrimination) and the extent to which test-takers find the questions challenging (difficulty). Through this examination, researchers intend to gain valuable insights into the test's effectiveness and appropriateness as an assessment tool.

2.0 Methodology

- **Research Design**

The researcher has used a research design in the form of a survey of science pre-service elementary teachers and used a quantitative approach.

- **Sampling Process**

This study employs a simple random sampling method, whereby the Nilai district was chosen randomly as the study's subject. This study selected second-year science pre-service elementary teachers from science education courses in IPG Pendidikan Teknik as the study sample.

- **Data Collection**

This study built the ACTIVE module assessment test with 18 objectives and three structural questions. The multi-choice questions were adapted and adopted from the Force Concept Inventory (FCI), while the open-ended questions were from the exercise and reference book. Every multiple-choice question (MCQ) comprised a stem and five options, with students required to choose the best answer from these five choices. A correct response earned two marks, and there were no penalties for incorrect answers. At the same time, three open-ended questions carried ten marks for each question.

- **Data Analysis**

The ANATES4 software was employed to evaluate the difficulty and discrimination indices of each multiple-choice question and open-ended item, utilising the results from the assessment test of the ACTIVE Module. The item difficulty index is calculated by dividing the number of correct responses to a test item by the total number of responses (Johnstone, 2004; Sim & Rasiah, 2006). When the difficulty index value was less than 30 per cent, an item was assumed to be difficult; when it was more than 80 per cent, it was assumed to be easy. The item discrimination index gauges the disparities in correct response percentages between students in the upper and lower groups. This study's difficulty index's interpretation scale refers to Karno To (1996) as in Table 1. While for the discrimination index refers to Mehrens & Lehmann (1991), as shown in Table 2.

Table 1. Interpretation of the difficulty index

Difficulty Index (p-value)	Interpretation
0% - 15%	Too Hard
16% - 30%	Difficult
31% - 70%	Moderate
71% - 85%	Easy
86% - 100%	Very Easy

Source: Karno To (1996)

Table 2. Interpretation of the discriminatory index

Discrimination Index (DI)	Interpretation
Negative – 10%	Very Bad
10% - 19%	Bad
20% - 29%	quite good
30% - 49%	Good
50% and above	Excellent

Source: Mehrens & Lehmann (1991)

Karno To (1996) states that a more than 50 per cent discriminatory index scale can distinguish the group between high-performing and low-performing students. Moreover, if the discriminatory index value is less than 20 per cent, the test question is unsuitable for use in the study and should be dropped.

3.0 Result and Discussion

The test involved 37 students in measuring the discrimination and difficulty index of the ACTIVE Module assessment (MCQ and open-ended questions) using ANATES4 software. Table 3 shows that the ACTIVE Module assessment's MCQ question discrimination index value ranges from 40.00 to 80.00 per cent. This value indicates that the discriminatory index of each MCQ question item is at a good and excellent level. Next, for the value of the difficulty index, each objective question item is in the range of 20.45 per cent to 73.11 per cent. These results show that the difficulty index is at a moderate and difficult level in accordance with the HOTS level. Therefore, the difficulty of each question in the MCQ question of the ACTIVE Module assessment of this set is balanced. The results of this study show that each question item developed to measure students' HOTS mastery remains used in the actual study (Karno To, 1996).

Table 0 The value of the discriminant index and the difficulty index of objective questions

Item	DI (%)	Discrimination index	p-value (%)	Difficulty index	Alpha Cronbach
1	60.00	'Excellent'	72.97	Easy	0.80
2	60.00	'Excellent'	71.55	Easy	
3	60.00	'Excellent'	37.84	Moderate	
4	60.00	'Excellent'	72.86	Easy	
5	50.00	'Excellent'	72.97	Easy	
6	40.00	'Good'	75.68	Easy	
7	60.00	'Excellent'	32.43	Moderate	
8	80.00	'Excellent'	35.14	Moderate	
9	60.00	'Excellent'	73.11	Easy	
10	70.00	'Excellent'	38.21	Moderate	
11	50.00	'Excellent'	40.54	Moderate	
12	70.00	'Excellent'	72.97	Easy	
13	50.00	'Excellent'	21.62	Hard	
14	60.00	'Excellent'	23.42	Hard	
15	50.00	'Excellent'	35.14	Moderate	
16	80.00	'Excellent'	43.24	Moderate	
17	40.00	'Good'	21.62	Hard	
18	40.00	'Good'	20.45	Hard	
19	0				
20	0				

Table 4 Discrimination index value and difficulty index for application questions

Item	DI (%)	Discrimination index	p-value (%)	Difficulty index	Alpha Cronbach
1	31.00	Good	41.00	Moderate	0.76
2	33.00	Good	28.50	Hard	
3	34.00	Good	40.50	Moderate	

The value of the discriminatory index and the difficulty index for the application question in the ACTIVE Module test set are determined through the ANATES4 software. Based on Table 4, the results of the pilot data analysis of the ACTIVE Module test set show that the value of the application question discrimination index is between 31.00 per cent and 34.00 per cent. This shows that the discrimination index of each application question item of the ACTIVE Module test set is good. Next, the difficulty index value of each application question item ranges from 28.50 to 51.00. This value indicates that the difficulty index is moderate and difficult. Therefore, the difficulty of the questions in this test is balanced. Alpha Cronbach's reliability value exceeds 0.60, summarising that the item has internal stability and consistency (Cresswell 2005; Sekaran 1992). The value of Alpha Cronbach equal to 0.76 indicates that the item has good reliability and can be adopted in real studies (Sekaran 1992; Karno To 1996; Siti Rahayah 2003; Mohd Majid 2009; Pallant 2013).

4.0 Conclusion

This study's findings underscored the significance of item analysis, including difficulty and discrimination indices. To enhance the development and evaluation of future tests, it is advisable to incorporate items of moderate difficulty that exhibit a robust discriminatory capacity. Moreover, such an approach will likely enhance students' performance and provide a more precise distinction among them (Wallach et al., 2006). Following each examination, it is recommended that other researchers conduct additional item analyses. This additional analysis will aid in identifying potential flaws in the design of multiple-choice questions (MCQs) and open-ended questions, ultimately improving the assessment standards for examinees' subject-matter comprehension (Haryadi et al., 2022).

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Cabaran Pelaksanaan Mata Pelajaran Sains Komputer Sekolah Menengah

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Abstrak

Pelaksanaan pengajaran dan pembelajaran Sains Komputer (SK) sekolah menengah adalah berdasarkan sukatan kurikulum baharu KSSM. SK dibahagikan kepada dua bahagian iaitu teori dan aplikasi. Faktor pengetahuan guru, pengurusan masa, keperluan modul tambahan, dan kesediaan komputer serta bahan bantu mengajar memainkan peranan penting kepada tercapainya objektif pembelajaran mata pelajaran ini. Justeru, kajian ini meninjau pandangan guru Sains Komputer di Pulau Pinang tentang cabaran pelaksanaan pengajaran SK berdasarkan faktor-faktor tersebut. Data dikutip menggunakan kaedah kualitatif ini telah menemu bual sepuluh orang partisipan. Mereka adalah sepuluh orang guru mata Pelajaran SK. Dapatan temu bual sampel yang dipilih secara bertujuan ini mendapati guru mempunyai pengetahuan yang sederhana dalam melaksanakan kurikulum SK, masa yang diperuntukkan untuk menghasilkan kerja kursus adalah rata-rata tidak mencukupi, terdapat keperluan mewujudkan modul tambahan sebagai bantuan pengajaran di dalam kelas, dan terdapat keperluan menambah bahan bantu mengajar untuk memudahkan pengajaran. Dapatan ini mengimpikasikan bahawa kurikulum SK perlu dikembangkan dan diperkembangkan, di mana latihan dan kursus secara berterusan perlu dibekalkan kepada guru-guru SK, serta kemudahan peralatan, bahan bantu mengajar, dan modul perlu disediakan di peringkat sekolah agar cabaran dalam melaksanakan pengajaran dan pembelajaran mata pelajaran SK ini dapat diatasi.

Kata kunci: *pengetahuan guru, penggunaan masa, modul, BBM, sains komputer*

1.0 Pengenalan

Kurikulum yang dinamik mampu berubah mengikut peredaran semasa. Perkembangan kurikulum di Malaysia bermula dari zaman Kurikulum Lama Sekolah Rendah (KLSR) dan Kurikulum Lama Sekolah Menengah (KLSM), yang di mana hari ini diganti dengan Kurikulum Standard Sekolah Rendah (KSSM) dan Kurikulum Standard Sekolah Menengah (KSSM). Pemangkin kepada setiap fasa perubahan ini ialah guru. Menurut Azizi (2019), guru adalah insan yang melaksanakan dasar kurikulum untuk mencapai matlamat yang digariskan. Oleh itu, guru perlulah mempunyai pengetahuan dan kemahiran yang mencukupi agar proses pengajaran dan pembelajaran di dalam bilik darjah terlaksana mengikut objektifnya. Bullock (2015) menyatakan antara kriteria guru yang baik dari perspektif pelajar ialah guru yang berkemahiran, mempunyai pengetahuan yang luas tentang subjek yang di ajar, mengguna dan menguruskan masa pengajaran dengan tepat, dan menggunakan teknologi terkini dalam pengajaran. Noor Hanim (2020) menyatakan pendidikan menjadi faktor utama membangunkan negara dalam zaman revolusi industri 4.0, di mana pelajar perlu diberikan pendidikan yang berkualiti, berdaya maju, dan sanggup mengharungi cabaran digital di masa hadapan.

Sains Komputer (SK) merupakan mata pelajaran baharu yang diperkenalkan kepada pelajar Tingkatan 4 dan Tingkatan 5 sebagai subjek pilihan. Terdapat perubahan ketara dari segi standard pembelajarannya yang lebih menjurus kepada idea membangunkan aplikasi, penggunaan teknologi terkini, kaedah penyelesaian masalah yang dibangkitkan, dan penghasilan pengaturcaraan. Pelaksanaan kurikulum mata pelajaran Sains Komputer ini dilihat mampu menyediakan pelajar dengan ilmu dan kemahiran yang diperlukan dalam dunia hari ini. Kementerian Pendidikan menanamkan hasrat dan tekad untuk menaiktaraf kualiti kemenjadian pelajar sejajar dengan aspirasi meletakkan Malaysia dalam kelompok terbaik dunia (Kementerian Pendidikan Malaysia 2013). Namun sejauh mana hasrat ini tercapai adalah bergantung kepada persediaan guru untuk menyampaikan ilmu. Justeru itu, pengetahuan dan kemahiran guru tentang kandungan mata pelajaran ini adalah faktor penting untuk mencapai objektif pembelajaran yang ditetapkan.

2.0 Latar Belakang Masalah

Sariah (2015) menyatakan kurikulum berasaskan standard amalan antarabangsa dijemakan dalam KSSM menerusi penggubalan Dokumen Standard Kurikulum dan Pentaksiran (DSKP). DSKP telah dibina oleh Bahagian Pembangunan Kurikulum (BPK) di Kementerian Pendidikan Malaysia sebagai panduan utama guru-guru yang mengajar di peringkat sekolah. Kandungan DSKP ini dibina merangkumi topik-topik penting dalam setiap mata pelajaran yang ditawarkan. DSKP Sains Komputer.

DSKP SK merangkumi dua bahagian utama, iaitu standard pembelajaran dan standard prestasi. Guru dikehendaki untuk mengajar berpandukan standard pembelajaran, manakala standard prestasi pula digunakan untuk menilai tahap prestasi kefahaman dan penguasaan pelajar. Penilaian standard prestasi perlu berpandukan rubrik yang sesuai agar dapat menilai tahap penguasaan pelajar dengan lebih tepat dan adil (Azizi 2016). Namun, adakah guru-guru mempunyai pengetahuan yang secukupnya untuk menjalankan pentaksiran bagi mata pelajaran ini?

Dalam usaha untuk merealisasikan Pelan Pembangunan Pendidikan Malaysia, guru-guru disaran untuk meningkatkan kemahiran mengajar selaras dengan perubahan kurikulum. Ahmad dan Jinggan (2015) menyatakan pencapaian akademik pelajar turut berhubung kait dengan pengaruh kompetensi kemahiran guru. Selain itu, perancangan proses pengajaran dan penggunaan masa perlu diambil perhatian. Menurut Butt (2006), perancangan pengajaran dapat membantu guru menyediakan bahan mengajar dan memperuntukkan masa yang sesuai mengikut aktiviti yang dijalankan. Jadual 1 menunjukkan kerja kursus mengikut fasa yang perlu dilaksanakan oleh setiap pelajar. Kerja kursus ini akan dinilai dan diberikan tahap penguasaan pelajar. Namun, jika diteliti masa pengajaran yang diperuntukkan untuk pengajaran dan pembelajaran adalah terhad. Persoalannya, adakah masa yang diperuntukkan ini mencukupi bagi pelajar untuk mempelajari teori dan menghasilkan kerja kursus dalam tempoh masa yang sama?

Oleh kerana Sains Komputer merupakan satu mata pelajaran baharu, guru perlu diberikan kursus-kursus kemahiran yang mencukupi. Di samping itu, keperluan modul pengajaran juga dilihat sangat penting sebagai bantuan kepada guru untuk mengajar. Ummu Nasibah (2015) menyatakan modul pengajaran merupakan antara elemen utama menjayakan sesuatu pengajaran. Samni (2015) turut menyatakan penggunaan modul pengajaran mampu memperkembangkan potensi sebenar para pelajar. Justeru, kajian ini bertujuan menentukan cabaran pelaksanaan mata pelajaran Sains Komputer di sekolah menengah.

3.0 Metodologi Kajian

Kajian ini menggunakan kaedah kualitatif iaitu temu bual. Seramai sepuluh orang partisipan yang dipilih secara bertujuan sebagai sampel kajian. Mereka adalah ketua panitia serta guru-guru mata pelajaran SK. Instrumen kajian adalah protokol temu bual yang disahkan oleh pakar bidang SK dan pensyarah kanan IPT yang pakar dalam bidang SK. Data dikumpul menggunakan kaedah temu bual. Validiti data yang dikumpul disemak oleh partisipan yang ditemu bual itu sendiri setelah transkripsi temu bual dijalankan dan didokumenkan. Pendekatan Grounded theory (Strauss dan Corbin, 1998) di gunakan bagi menganalisis data kualitatif melalui proses koding (open, axial dan selective) secara tematik. Dapatan kajian dilaporkan juga dalam bentuk tematik yang disokong oleh dialog temu bual yang direkodkan.

4.0 Jangkaan Dapatan Kajian dan Kesimpulan

Penambahbaikan dalam sistem pengajaran dan pembelajaran guru-guru mata pelajaran Sains Komputer hasil daripada dapatan kajian berbentuk kualitatif dilihat dapat memberi kesedaran tentang kepentingan dalam meningkatkan pengetahuan guru-guru dalam bidang Sains Komputer dengan penambahan kursus-kursus luar berdasarkan sukatan pelajaran Sains Komputer serta teknik-teknik pengajaran dan penggunaan sistem-sistem yang akan digunakan sepanjang sesi pembelajaran pelajar-pelajar dalam subjek Sains Komputer. Selain itu, guru-guru yang telah menjalani kursus-kursus dalam bidang ini turut perlu mengurus masa dengan lebih baik berdasarkan Rancangan Pengajaran Tahunan (RPT) agar sukatan mata pelajaran pelajar-pelajar dapat dihabiskan mengikut ketetapan masa yang dirancang seiring dengan kerja kursus yang perlu disiapkan pelajar dalam tempoh yang telah diberikan. Usaha-usaha guru dalam menyediakan modul seperti pengumpulan soalan-soalan ujian prestasi (UP), ujian pertengahan sesi akademik (UPSA), ujian akhir sesi akademik (UASA) serta ujian sijil pelajaran malaysia (SPM) adalah sebagai salah satu langkah guru-guru untuk mempelbagaikan soalan-soalan latihan mata pelajaran Sains Komputer kepada pelajar dalam meningkatkan prestasi dalam kelas dan pelajaran. Disamping itu, guru-guru mata pelajaran Sains Komputer ini juga perlu berfikir kreatif dan kritis dalam menyediakan bahan bantu mengajar mengikut peredaran perkembangan teknologi seiring dengan kemunculan pendigitalan yang diterajui oleh teknologi berdasarkan revolusi perindustrian atau Industrial Revolution 5.0 (IR 5.0) yang telah mulai diperkenalkan.

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Difference of Job Stress Among Higher Technical and Vocational Teachers in Shanxi Province, China: Gender Factor

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Abstract

Teacher job stress is an essential reason for teacher turnover, professional burnout, and reduced career attractiveness. Educational institutions have increased requirements for technical and vocational colleges. The increase in the number of students in vocational and technical colleges has made teachers in vocational and technical schools feel unprecedented pressure. As the requirements for the overall level of teachers increase, teachers' pressure also increases. However, there are few studies on teachers' job stress in China, especially on teachers' job stress in higher vocational colleges. Therefore, this study aims to determine the job stress level of teachers and to analyze the job stress of teachers in higher vocational colleges from a gender perspective in Shanxi Province, China. Questionnaires were distributed to 2,557 teachers from five higher vocational colleges in Shanxi Province. Descriptive statistics and t-test are used to analyze the job stress level and gender differences of higher vocational teachers. The research results show that the overall job stress of teachers in higher vocational colleges in Shanxi Province is at a medium to high level, and there are significant differences in career development and workload between vocational teachers of different genders. Male teachers have more significant pressure on career development and workload than female teachers.

Keywords: *job stress, Higher Technical and Vocational Teachers, gender*

1.0 Introduction

In order to improve the adequate supply of high-quality skilled talents urgently needed for the construction of a modern economic system and implement the higher vocational education requirements proposed in the "National Vocational Education Reform Implementation Plan" to provide students with a variety of enrolment methods and learning methods, China has begun to launch higher vocational education enrolment expansion. However, the rapid enrolment growth in the short term has brought reform pressure to higher vocational education, with the rapid expansion of the number of teachers in colleges and universities. According to the latest statistics released by the Ministry of Education, there were 1,418 higher vocational colleges nationwide in 2018, with a total enrollment of approximately 3.69 million. In 2019, the final total enrollment was approximately 4.84 million, an increase of approximately 1.15 million in enrollment up to 31% (Yu & Ding, 2021). Adding new teachers not only injects fresh blood into higher education but also intensifies the academic competition in the teaching profession.

Moderate competition can ensure teachers' lasting creativity and is conducive to the healthy growth of teachers' academic careers. However, excessive competition will increase teachers' sense of pressure and affect teachers' teaching, scientific research work, professional development, and students' academic performance (Wang, 2021). In recent years, although the growth of the teaching staff in colleges and universities has gradually stabilized, some newer research still shows that the occupational pressure faced by college teachers cannot be ignored.

Research by Liu Zhicheng of Hunan Agricultural University found that 65.7% of Chinese university teachers feel very or relatively stressed, and only 2% feel no pressure (Liu, 2004). It can be seen that teachers are generally under high job stress at this stage, and it is of great significance to the development of college teachers to face the job stress and find the crux of the problem. Ignoring this status quo will not only hurt the construction of the teaching staff but also affect the long-term development of the entire higher education field.

2.0 Dimensions for Job Stress

Most research on teachers' job stress mainly focuses on the manifestations and sources of stress. Job stress includes stressors and the outcomes of strain; it refers to job-related negative stimuli and a worker's physiological and psychological reactions (Ling et al., 2004). Teachers with high levels of stress from these two sources show higher negative health and vocational outcomes, including burnout (emotional exhaustion, denationalization, and reduced personal accomplishment), absenteeism, and exit from the teaching profession (Betoret, 2006; Jepson & Forrest, 2006; Kyriacou, 2001). Teacher job stress refers to teachers' unpleasant negative emotional experiences that can lead to excessive physical and mental fatigue, nervous tension, frustration, or distress due to excessive working hours, heavy workload, and serious misconduct of students (Roeser et al., 2013). Research shows that teaching is among the most stressful professions (Johnson et al., 2005; Herman et al., 2020; Greenier et al., 2021). Sources of stress among teachers are workload, relationship with colleagues, role conflict, role ambiguity, discipline problems, time pressure, lousy working conditions, self-respect, inadequate support from friends, family, and colleagues, and low motivation among students (Detert, Caravella, Derosia, & Duquette, 2006). Nowadays, higher vocational college teachers have to carry out normal teaching activities and complete some necessary scientific research tasks. At the same time, teachers in higher vocational colleges also need to handle relationships with leaders, colleagues, and students and face evaluation or inspection by students and superior organizations (Zheng, Chen & Yang, 2021). These workloads bring a certain amount of job stress.

Chinese scholars have conducted in-depth research from different disciplines and perspectives regarding teacher job stress. Zhang (2005) preliminarily extracted six significant factors of teachers' job stress through exploratory factor analysis: organizational structure, interpersonal relationship, career development, family, workload, and self-expectation. Li et al. (2007) surveyed 522 university teachers. The survey found that college teachers have a certain degree of job stress; the top three sources of stress for college teachers are unsatisfactory income, complex scientific research and articles, and low return rates. Liu and Cheng (2021) summarized the pressure sources of returnee young teachers. They found two main types of pressure for returnee young teachers: scientific research indicators, teaching tasks, administrative tasks, superior-subordinate relationships, colleague relationships, and external evaluation of work. These six aspects of job stress are the life pressure of five aspects: family finances, emotional problems, supporting parents, children's education, and human relations (Liu & Cheng, 2021). The primary sources of psychological stress for returnee young teachers in colleges and universities are work requirements and evaluation methods, life needs, and interpersonal communication. According to the average score of each item of the stressors, the top five stressors were obtained: "research tasks and difficulty," "evaluation and promotion," "economy and housing conditions," "practical education," "teaching tasks and difficulty," attributed to work requirements and evaluation methods; the most minor three stressors were "family needs," "physical condition" and "interpersonal relationship," which were attributed to life needs and interpersonal communication. Based on the above studies, Chinese researchers have paid more attention to factor analysis and empirical research on teachers' job stress in recent years.

The job stress in this study is the interaction between teachers and external factors such as the surrounding work environment, which changes teachers' psychological or physical conditions, including organizational function, social support, interpersonal communication, career development, and workload. The five factors of job stress are defined as follows:

- a) Organizational function refers to the school's leadership decision-making, political struggle, degree of democratic participation in decision-making, supervision, reward and punishment system rationality, etc.
- b) Interpersonal function refers to the exchange and communication with colleagues, the relationship between superiors and subordinates, gender discrimination, and the degree of concern leaders have for subordinates and subordinates.
- c) Workload refers to the need to update and accelerate knowledge, continuous learning, work overload, social expectations, etc.
- d) Career development refers to job requirements, professional title evaluation, high education requirements, future development and goals, etc.
- e) Social support refers to the degree of support and physical condition of the surrounding people.

Teachers exist in organizations as individuals and individual behaviors will affect the organization's operation, that is, the quality of teaching, which affects the quality of school running, and students' physical condition (Wang, 2021). Research shows that 67% of university teachers suffer from moderate or above job stress. 46% of young teachers have moderate or above professional burnout (Zheng et al., 2021). According to past research, teachers of different genders have significant differences in workload factors, job security factors, organizational management factors, career development factors, scientific research title evaluation factors, and overall pressure (Cai, 2019). At the same time, a search on China CNKI found 0 articles with the keywords "different genders" and "teacher job stress", so there are very few analyzes of differences in teachers' job stress that specifically focus on different genders. Therefore, teacher pressure has also become a problem that cannot be ignored in higher vocational colleges. In recent years, as the number of students enrolled in higher vocational and technical schools has increased yearly, teachers' teaching hours have increased, and their tasks have been arduous. Schools and society have increasingly higher requirements for teachers, but the quality of students has not changed. Teachers' salaries and benefits have not been improved accordingly, and the job stress is high, which cannot effectively stimulate higher vocational teachers' subjective initiative and work enthusiasm. If this state continues for a long time, it will inevitably affect the job satisfaction of higher vocational teachers (Luo, 2015).

The main objective of this study is to determine the differences in job stress among different genders among higher vocational teachers in Shanxi Province. The underpinning research objective is as stated:

1. To identify demographic profiling of the respondents, such as age, marital status, gender, education, and professional title.
2. To determine the level of job stress among higher vocational and technical teachers in Shanxi Province, China.
3. To determine the differences in job stress between different genders among teachers in higher vocational colleges in Shanxi Province.

3.0 Methodology

This study is a correlational quantitative study. The research subjects were teachers from five higher vocational and technical schools in Shanxi Province, a total of 2,557 teachers. This study collected survey data through the formal distribution of questionnaires. 550 questionnaires were randomly distributed, and 520 valid questionnaires were obtained. This paper describes the overall status of job stress among teachers in higher vocational colleges in Shanxi Province and determines the differential effects of job stress between genders.

This study uses IBM SPSS Statistics to research and analyze the collected survey data. The analysis methods mainly include descriptive statistical analysis and t-tests. Descriptive statistical analysis included frequency, mean, and standard deviation of statistics. It is used to describe the current situation of teachers' job stress. A t-test was used to analyze the impact of different

genders on teachers' job stress.

4.0 Findings and Discussions

Detailed demographic characteristics of higher vocational college teachers in the study are presented in Table 1.

Table 1. Demographic Characteristics of Higher Vocational College Teachers (N=2,557)

Characteristics		n	Percentage (%)
Gender	Male	254	48.8
	Female	266	51.1
Marital status	Married	108	21.1
	Unmarried	410	78.8
Age	Under 30	179	34.4
	31-40	212	42.1
	41-50	99	19.0
	Over 50	30	5.8
Educational background	Bachelor	133	25.5
	Master	288	55.5
	Doctor	99	19.0
Title	Teacher Assistant	112	21.5
	Lecturer	201	38.6
	Associate Professor	143	27.5
	Professor	63	12.1

The descriptive statistics of the job stress of teachers in higher vocational colleges in Shanxi Province are shown in Table 2.

Table 2. Generally descriptive statistics of higher vocational college teachers' job stress

Items	Mean	SD
Organizational function	2.96	.85
Career development	3.62	.61
Workload	3.44	.65
Interpersonal function	2.52	.88
Social support	2.67	.87
Total	3.04	.69

It can be seen that the average score of job stress of teachers in higher vocational colleges is $M = 3.04$, which shows that the job stress of teachers in higher vocational colleges belongs to the middle level. At the same time, the average value and standard deviation of each job stress factor can be obtained. Among them, career development and workload have higher average scores.

Within the scope of the study, the gender of teachers in higher vocational colleges is used as the independent variable, and job stress is the dependent variable. Independent-sample t-tests were used to examine the job stress scores of teachers of different genders. The results obtained

are shown in Table 3.

Table 3. Summary of higher vocational college teachers' job stress in different gender

Factor	Sex	Mean	t	Sig.(2-tailed)
Social support	Male	2.70	-.36	.72
	Female	2.65		
Organizational function	Male	2.99	.99	.25
	Female	2.94		
Interpersonal function	Male	2.55	-.05	.96
	Female	2.49		
Career development	Male	3.66	1.32	.05
	Female	3.59		
Workload	Male	3.50	1.38	.04
	Female	3.37		
Total	Male	3.05	.96	.26
	Female	3.01		

It can be seen from Table 3 that there are significant differences in career development and workload among higher vocational teachers of different genders ($p < 0.05$). There were no significant differences in social support, organizational function, and overall job stress ($p > 0.05$). Male teachers are more stressed than female teachers regarding career development and workload.

5.0 Conclusion

This study aims to understand the differences in demographic variables and job stress among teachers in higher vocational colleges in Shanxi Province, especially to understand the differences in job stress among different genders among teachers in higher vocational colleges in Shanxi Province. The results show that the overall job stress of teachers in higher vocational colleges in Shanxi Province is medium to high, among which the career development pressure and workload are relatively high, while the interpersonal communication pressure is relatively low. The reasons for this result are that for a long time, social groups lack proper understanding of China's higher vocational education, higher vocational colleges lack positive evaluation, and teachers are under pressure from society (Liu, 2006). At the same time, with the implementation of the enrollment expansion policy, the competition for teachers has become more intense, and society has higher and higher requirements for teachers.

While completing their work, higher vocational teachers must also upgrade their academic qualifications and professional titles. The particularity of colleges and universities is a university with solid practicality, so the requirements for teachers' knowledge reserves are higher. Also, this study found that higher vocational teachers of different genders had no significant impact on social support, organizational function, and overall job stress. There are significant differences between vocational teachers of different genders in career development and workload. Male teachers are more stressed than female teachers regarding career development and workload.

There are specific differences in job burnout between male and female teachers, and the reason may be related to the personality differences of teachers of different genders and the different roles played by men and women in traditional Chinese concepts. For a long time, people have used salary income, position, and social status to measure the value of men. Although teachers' salaries have increased significantly in recent years, compared with teachers in undergraduate colleges, civil servants in government agencies, and rising prices, their income levels and social status are not high, which has led to a job shortage of male teachers. The pressure is high, work enthusiasm and satisfaction are low, and work burnout is easy.

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Exploration of Artificial Intelligence in Employer Decision-Making for Hiring Fresh Graduate Employees in Guangzhou's Higher Education Sector

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Abstract

The emergence of artificial intelligence (AI) has promoted economic development, improved productivity, changed employment patterns, and altered labor demands. AI has influenced the education system, facilitating rapid development in education. Previous research has primarily focused on the application of the integration of AI and education, as well as how AI development drives progress in education. Some studies have concentrated on predicting important skills needed in future AI scenarios. Furthermore, Employers have been suggesting that universities and higher education should focus on graduates' employability skills to adapt to the AI environment. AI has reduced job opportunities in the employment market. The youth unemployment rate in China is difficult to reduce, and the advent of AI has exacerbated the severity of the rising unemployment rate, leading to a continuous digital divide issue among student and teacher populations. Hence, the literature review reveals a research gap concerning employer skills and preferences across different industries. This study, from the perspective of employers, focuses on various industry employers in Guangzhou to explore the impact of AI on the decision-making process for recruiting recent graduates in Guangzhou. It aims to investigate the skills graduates need to possess in the context of AI to enable employers to make recruitment decisions. Based on the three research questions, this design adopts a mixed-method approach to obtain a comprehensive understanding and reliable results. Qualitative data are collected using open-ended questions, and thematic analysis is used to interpret the results for the first question. Quantitative data are gathered through a questionnaire survey, employing descriptive statistical analysis for the second question and comparative analysis to address the third question. This study involves HR, CTO, CEO, HM, and EA professionals across various industries in the education, corporate, and government sectors in Guangzhou. In the AI employment environment, the research findings will provide effective information for educational curriculum development and career guidance for graduates, enabling the scientific and rational cultivation of students. It will aid Guangzhou's higher education institutions in better understanding the recruitment field and societal dynamics, allowing the efficient establishment of recruitment relationships between employers and graduates. Academically, it extends the existing knowledge base in the fields of artificial intelligence, human resources, and decision science.

Keywords: artificial intelligence, employer decision-making, hiring fresh graduate employee, higher education sector

1.0 Introduction

The advent of AI technology has led to a transformation in employment opportunities, which in turn poses significant challenges for the educational system. The impact of information technology and computers has greatly reduced the labor force demand in the job market (Obi, Oye, Mohd, & Bernice, 2012). AI is increasingly being applied at work to improve task execution and performance (Lee, Davari, Singh, & Pandhare, 2018; Von Krogh, 2018), which leads to fewer job opportunities. It is estimated that 80% of the US workforce will have at least 10% of their jobs affected by AI, and 19% of the US workforce will have 50% of their jobs affected (Eloundou et al., 2023).

Education is considered an investment in individuals' skills and knowledge, which subsequently enhances their productivity and earning potential in the labor market (Becker, 1993). It is important to note that the demand for future workers will depend on occupational adaptability and the needs of the job market, not just academic qualifications. (Zahari & omar, 2019). In the job market, what matters most is an economy driven by new knowledge and technology and a vast global market (Zahari & omar, 2019).

2.0 Problem Statement

China's youth unemployment rate and employment difficulties for graduates are becoming increasingly serious. The concerning challenge of fresh graduate unemployment in China is exemplified by the rising unemployment rate among the urban population aged 16-24 has surged to 21.3% as reported by the Ministry of Education (2023). The advent of AI has intensified the challenges of limited employment opportunities, skill iteration, and job displacement, reducing the number of workers in the labor market. AI have notably diminished the workforce in the job market (Agrawal, Gans & Goldfarb 2019; Zhou, 2020; Piroșcă, 2021). Studies shows that that enterprises with more substantial market capitalization, high cash reserves, and significant research and development (R & D) investments exhibits a stronger demand for AI skills (World Economic Organization & UNESCO, 2023; Alekseeva, Azar, Gin'e, Samila & Bledi Taska, 2021). While most graduates do not possess (Alekseeva et al., 2021). Consequently, these studies underscore the impact of AI on the labor market landscape, signaling persistent challenges in graduate employment despite AI has facilitated the recruitment process.

3.0 Research Objective

The purpose of this study is to study the artificial intelligence exploration in the decision-making of employers of fresh graduates in higher education in Guangzhou from the perspective of employers. It recognized the imperative of higher education institutions to possess a comprehensive understanding of employers' decision-making processes in hiring fresh graduates in the era of AI, to effectively support students in navigating environmental constraints and developing coping mechanisms for potential obstacles in labour market (Lent, 2013; 2018).

4.0 Research Questions

1. What are the key requirements and expectations of employers in the context of AI industrial innovation?
2. What are the specific AI-related skills and certifications that employers prioritize and seek in potential candidates?
3. How do the required skills and certifications vary across different enterprises and industries in the context of AI?

5.0 Literature Review

Previous research has focused on how AI has changed the job market and its impact on it (Agrawal, Gans & Goldfarb 2019; Zhou, 2020; Pirofagi, 2021). The data algorithm bias of AI combined with recruitment (Van Esch, Black, & Ferolie, 2019). AI improves the efficiency of enterprise recruitment (Black & Esch, 2019). Progress of AI replaces labor force (Bresnahan, 1999; MGI, 2013; David, Levy, & Murnane, 2003; Strich, Mayer & Fiedler, 2021). AI systems not only substitute parts of employees' work processes, but many can also replace defining core activities that constitute the profession itself (Acemoglu & Restrepo, 2018; Anderson et al., 2018; Bughin et al., 2018; Harari, 2017). Future of job report 2023 predicts the trend of AI affecting the future labor market demand (Li, 2022; World Economic Organization 2023; UNESCO, 2023;).

Based on the results of studies, the requirements of job candidates in employability skills and academic qualifications vary widely among companies and employers. Schmitt & Chan (1998) argued that instead of matching job demands with individuals' KSA, there is a need to understand how the hiring process takes place and what affects the same. According to the results of 23 years of Research by High Fliers Research, a well-known British employment information website, having a prestigious university (G5/ Russell Group), science and engineering (especially energy, engineering), and business (accounting, management, etc.) background is the object of competition for British employers. Focus on creativity and critical thinking, persistence, communication or collaboration are also required skills for graduates. (Vincent-Lancrin et al., 2020). Individuals on the Coursera platform prioritize the development of technical or "hard" skills related to lucrative careers such as programming and data analytics. Increasingly emerging technologies such as generative artificial intelligence are reshaping Labour demand, with employers placing greater emphasis on 'soft' skills (Vincent-Lancrin et al., 2020).

6.0 Theoretical Background

Based on phenomenology, this paper studies the employers' suggestions on college students' training and graduates' working skills from objectivity and practical experience. Phenomenology is a philosophy that is concerned with the question of how individuals make sense of the world around them. The study followed a hermeneutic phenomenological design to interpret and understand experiences shared by participants by relating them to relevant features of context (Groenewald, Citation2004). For Giorgi, the operative word in phenomenological research is 'describe'. The aim of the researcher is to describe as accurately as possible the phenomenon, refraining from any pre-given framework, but remaining true to the facts. According to Welman and Kruger (1999, p. 189). Researchers should set aside bias or prior influence and should focus on how employers interpret and share ideas. In addition to this, recruitment and employment phenomena should be described as fully as possible through the employer's perspective, linking objectivity to practical experience, describing the skills employers are looking for in graduates, and explaining the hiring experience.

7.0 Theoretical definition

Employers' Decision Making: Employers evaluate and reward workers based primarily on assessments of workers' abilities. (Becker, 1971; Heckman, 1998; Mincer, 1958).

Hiring Decisions: Decisions made by a company or organization during the recruitment process, including decisions about whether to hire, who to hire, and how to hire (Bills, D.B., Stasio, V.D., & Gerxhani, K.2017).

Fresh Graduate: Fresh Graduate is explicitly defined in terms of possession of a qualification - a college or university Bachelor degree and is entering the job market for the first time or with minimal work experience (Scurry & Blenkinsopp, 2011).

8.0 Implication

The study's findings have the potential to increase employment opportunities for unemployed graduates and facilitate a smooth transition from education to work. Enhancing fresh graduates' employment outcomes, and align them with the goals of individual's investment in education (Becker, 1993). It will aid Guangzhou's higher education institutions in better understanding the recruitment field and societal dynamics, allowing the efficient establishment of recruitment relationships between employers and graduates. Academically, it extends the existing knowledge base in the fields of artificial intelligence, human resources, and decision science.

9.0 Future Work

Guangzhou is located in the Guangdong-Hong Kong-Macao Greater Bay Area economic circle, where the development and demand for AI is more advanced than in inland areas, and the findings of studies on AI influencing employers' hiring decisions may not be directly applicable to less developed areas. Secondly, because this study has carried out detailed division and investigation on the types of industries and enterprises in Guangzhou, the samples are diversified, and the results obtained are also comprehensive and diverse. Some provinces without Guangdong characteristic industries and organizations can not refer to the results of this study. Future researchers can conduct corresponding research on AI industry employers' hiring decisions in inland regions.

10.0 Methods

Based on the three research questions, this design adopts a mixed-method approach to obtain a comprehensive understanding and reliable results. This study divides the types of industrial and participants of employers in Guangzhou. According to the table1. This study involves HR, CTO, CEO, HM, and EA professionals across various industries in the education, corporate, and government sectors in Guangzhou. The method of data collection in this study was Open-ended questions and Questionnaire. Qualitative data are collected using open-ended questions, and thematic analysis is used to interpret the results for the first question. Quantitative data are gathered through a questionnaire survey, employing descriptive statistical analysis for the second question and comparative analysis to address the third question.

Table 1. Shows the details of data collection approach(es) and data analysis method(s) for each research question

Research question	Data collection approach	Data analysis method
1.What are the key requirements and expectations of employers in the context of AI industrial innovation?	Open-ended questions	Thematic analysis
2. What are the specific AI-related skills and certifications that employers prioritize and seek in potential candidates?	Questionnaire	Descriptive analysis
3. How do the required skills and certifications vary across different enterprises and industries in the context of AI?	Questionnaire Enterprises: state-owned enterprises, private companies, foreign enterprises	Comparative analysis

	Company Size: micro enterprises, small enterprises, medium-sized enterprises, large enterprises Industries: New information technology, New energy and intelligent connected vehicles, Intelligent equipment and high-end equipment, Biological medicine, New energy and new materials	

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Multicultural Counselling Competency and Clinical Skills for Lesbian, Gay, Bisexual and Transgender (LGBT) Clients among Registered Counsellors in Malaysia

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Abstract

Concerns about social change for marginalized Lesbian, Gay, Bisexual, and Transgender (LGBT) individuals has grown during the past decade. The ethical conundrums of countertransference and conflicting values may present difficulties for counsellors in their professional practice, raising questions over the efficacy of cultural assumptions and a shortage of training. Thus, this descriptive-correlational study aims to explore the relationship between multicultural counselling competency and clinical skills for LGBT clients among registered counsellors in Malaysia. Both established instruments had been adapted and translated into the Malay language before being completed by 219 randomly selected Malaysian registered counsellors. The findings of the study showed that the registered counsellor scored at a moderate level of multicultural counselling competency. Meanwhile, they scored highly in clinical skills for LGBT clients. Interestingly, this study found that there are significant relationships between multicultural counselling competency and clinical skills for LGBT clients. To be precise, there is a positive correlation between multicultural counselling competency and clinical skills for LGBT clients. In conclusion, the findings highlight the importance of addressing multicultural counselling competency and clinical skills in order to ensure the delivery of effective counselling services for LGBT clients by registered counsellors in Malaysia.

Keywords: *clinical skills, LGBT, multicultural counselling competency, registered counsellors*

1.0 Introduction

Concerns about social change for marginalized LGBT individuals have grown during the past decade. The ethical conundrums of countertransference and conflicting values may present difficulties for counsellors in their professional practice, raising questions over the efficacy of cultural assumptions and a shortage of training. As per Aga Mohd Jaladin (2017), the issue is a lack of experience dealing with counselling concerns, especially those that are special, like those concerning gay and lesbian sexuality. Professionals such as psychologists, therapists, nurses, counsellors, and social workers have been reminded to be culturally attentive to their clients' needs and difficulties in order to improve their professional development (Falender et al., 2014). Although there are gay and lesbian issues in Malaysian society, these minorities are disregarded and are left to manage these issues on their own without societal support (Mustanski et al., 2010).

In accordance with the past studies, the majority of counsellors, particularly those who are inexperienced with this sexuality issue and frequently exhibit one ignorance about LGBT clients, are much less willing to receive these clients (Grove 2009; Ebersole et al., 2018). According to the following research by Bartlett et al. (2009), 17 percent of counsellors attempted to help these

LGBT clients lessen the emotional stress brought on by their sexual behaviour, while 4 percent attempted to convert these clients to a heterosexuality. Concerns of values and sexuality can place a counsellor in unpleasant or awkward situations, in particular when it involves LGBT cases as it touches on their personal values and religious beliefs. The majority of Malaysian mental health and health-related professionals, according to See (2019), lack a fundamental knowledge and comprehension of the LGBT population. Additionally, it was claimed that mental health practitioners lack the necessary training to offer guidance and therapies that are tailored to the needs of LGBT clients.

Multicultural counselling competency encompasses a wide range of diversity categories. The ACA Code of Ethics (2014) includes the following categories: age, culture, disability, ethnicity, race, religion/spirituality, gender, gender identity, sexual orientation, marital/partnership status, language preference, immigration status, and socioeconomic status when it is referring to multiculturalism in code C.5. Non-discrimination. Necessary training is required in order for counsellors to work with LGBT clients. Based on a study conducted by Hesamuddin et al. (2019), it was found through interviews with six individuals from the LGBTQ community in Malaysia that there is a higher likelihood of individuals with depression and anxiety identifying as LGBTQ. A qualitative study by Zay et al. (2021) including 28 LGBTQ young individuals in Malaysia revealed that the participants lacked trust with the ability of mental health professionals to offer LGBTQ care. They commonly put off getting aid for their mental health as a result because they were afraid of being stigmatized. In accordance with these findings, Jamal et al. (2020) carried out a study that involved 15 Malaysian counsellors being interviewed, which likewise revealed a low level of knowledge and comprehension among counsellors regarding the care and support they provide for LGBTQ clients. The study suggested that counsellors who exhibit an interest in offering services that affirm LGBTQ people should receive specialized training and guidelines that they must adhere to.

Furthermore, while there is a lot of research on the effects of multicultural training on counsellors' multicultural competency, there is scarce data on how multicultural training among registered counsellors in Malaysia benefits LGBT individual counselling. The relationship between registered counsellors in Malaysia's multicultural counselling competency and clinical skills for LGBT population needs to be scrutinized. It has been established that training significantly influences the growth of multicultural and LGBT counselling competency. Specific LGBT-related training has been demonstrated to have similar impacts on boosting competency. Rutter et al. (2008) compared the enrolment of students in an elementary counselling course and those enrolled in a higher-level counselling course, where it was found that students in the higher-level course received considerably better results on the knowledge and skill subscales of the Sexual Orientation Counsellor Competency Scale (SOCCS). The researcher was unable to locate a study that looked into how self-perceived LGBT or multicultural courses affected Malaysian registered counsellors' ability to provide LGBT counselling.

By examining the strength, if any, of the relationship between multicultural counselling competency and clinical skills of dealing with LGBT clients, this research attempted to fill a gap in the literature on registered counsellors in Malaysia. Previous studies looking into these variables and LGBT counselling competency have revealed a disparity. As such, the researcher aims to concentrate on registered counsellors in Malaysia in efforts to explore their multicultural competency in counselling LGBT clients. In contrast to Western countries, Malaysia currently has minimal research on multicultural competencies (Mohd Jaladin et al., 2021). In fact, Harun et al. (2021) has indicated that there is need for improvement in the effort to strengthen multicultural training, regardless of by conducting counsellor preparation programmes or continuing professional development activities. In order to improve multicultural counselling competence, the proper and optimum exposure and training must be incorporated and carefully set out to do. This is important to ascertain, as a lack of competency may deteriorate the quality of services provided to LGBT clients by registered counsellors in Malaysia. This study may serve as a framework for policymakers in Malaysia to initiate training courses and offer educational

resources for registered counsellors as well as other healthcare professionals on how to deal with the issues with mental health that vulnerable minorities, like the LGBT community, could experience. Therefore, this study aims to explore the relationship between multicultural counselling competency and clinical skills LGBT clients.

2.0 Literature Review

According to the findings of Springer et al. (2020), it has been recommended that elementary school staff receive professional development on gender-related topics, with school counsellors playing a vital role in providing this training to teachers. The study suggests that counsellors are well-positioned to have a deeper understanding of the contextual factors that can either support or impede the development of transgender identities among students within their school environments.

Due to the numerous challenges experienced by gender minorities in school, the scant study on school counsellors' role in resolving gender diversity is alarming. According to Simons et al. (2020, 2021), some gender minorities encounter safety issues at home and school, lack access to encouraging resources, and lack the vocabulary to communicate their gender experiences. Additionally, their experiences are made more complicated by intersecting identities like race and sexual orientation, leading to higher levels of minority stress (Simons et al., 2021). For instance, the underrepresentation of transgender women in STEM disciplines adds to the stress experienced by those who are interested in these fields. It is critical that school counsellors comprehend and handle these particular difficulties faced by pupils from genders other than their own sexual orientation. Counsellors who are competent in multicultural counselling are better able to support and advocate for gender-diverse pupils (Simons et al., 2017).

Although Kosciw et al. (2020) discovered that Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, and Intersex (LGBTQQI) youth typically feel more comfortable opening up to mental health professionals based in schools, research has also raised questions about the training and expertise of school counsellors in working with this population (Asplund & Ordway, 2018; Goodrich et al., 2013; Strear, 2017). Although there is literature defining the best practices for school counsellors dealing with LGBTQQI young people, there is still a sense of uncertainty among these young people about the counsellors' readiness and skill.

3.0 Theoretical Background

In order to make the research intelligible, it needs to be placed within an acceptable theoretical framework. Two theories that would support the construction of this study are the Multicultural Theory and the Feminist Theory. These theories would serve as the foundation for this research paper, according to the researcher, who referred to them as the current study's skeleton.

The study was intended to encourage change and sustain equal access to counselling services in counsellor studies, and it was based on the multicultural and feminist theoretical frameworks. In order to alter cultural and social norms, feminist theoretical ideas, according to Goodman et al. (2004), advocate opposing minority group oppression. Many scholars tend to emphasize growth and restructuring occurring under disparate political ideologies, both from multicultural and feminist theoretical viewpoints (Crethar et al., 2008; Goodman et al., 2004). Counsellor educational interventions must take into account a client's encounters with social injustice, repression, stereotyping, and discriminatory in a variety of contexts in accordance with feminist and multicultural concepts (Crethar et al., 2008; Goodman et al., 2004). Counterproductive counselling techniques and misperceptions about sexuality may result from a lack of sexual orientation knowledge (Bidell, 2012; Bieschke et al., 2014; Crethar et al., 2008). In order to include diversity, culture, and human rights concepts when teaching counselling skills,

multiculturalism and feminist approaches use client-centered and societal models. Both feminism and multiculturalism have components that advance equality in counselling techniques for LGBT people seeking treatment for mental illnesses and contribute to the current study.

4.0 Implication

Counsellors are encouraged through feminist theory to ponder on and reflect on themselves on their own prejudices, assumptions, and beliefs. In a situation like working with LGBT clients, this self-awareness is especially crucial because culture can affect counsellors' different perspectives. Counsellors are able to strive for better objectivity, cultural sensitivity, and ethical practices in their work by critically assessing their own values and biases.

It is recommended that the integration of multicultural topics go beyond a single course in order to make certain that counselling students have an in-depth comprehension of multicultural knowledge. Collaboration between academicians from various backgrounds is necessary to include multiculturalism into the counselling curriculum's numerous components. This cooperative effort encourages an all-encompassing, interdisciplinary approach and makes sure that pupils are continually exposed to multicultural concepts as well as skills. In order to further develop their own multicultural counselling competencies and successfully include multicultural content into their courses, lecturers should also engage in ongoing professional development. The curriculum should be thoroughly reviewed in order to find and fill any gaps in multicultural representations.

To expose students to various communities and cultural situations, experiential learning opportunities such as practicum and internship experiences should be sought out. Implementing assessment strategies will help determine how effective multicultural education programmes are and will provide beneficial suggestions for curriculum improvement. These suggestions can be put into practise in order to develop counsellors who are able to work competently with a variety of populations and are culturally competent.

5.0 Future Work

This study's shortcoming is that it only focused on the state of Perak. In order to have a more generalized understanding of the results, additional in-depth study on the independent variable of multicultural counselling competence should be conducted with registered counsellors from different states in Malaysia.

Additionally, future study might incorporate new domains to increase its spectrum. Age, spirituality, and ethics are the domains that are recommended. Registered counsellors are participants of the current study. Participants in the upcoming study could include post- and undergraduate-level student counsellors in training and counsellor supervisors.

Lastly, in order to effectively work with LGBT clients, competence in multicultural counseling has become a crucial factor. When counselors demonstrate a profound understanding of the cultural and socioeconomic influences affecting LGBT individuals in Malaysia, they are better equipped to provide interventions that are culturally sensitive and appropriate. The study also emphasized the need for further training and development to enhance counsellors' multicultural counselling competency, particularly in addressing intersectional identities and the diverse experiences within the LGBT community.

6.0 Conclusion

This study confirms that there is a significant relationship between multicultural counselling

competency and clinical skills of working with LGBT clients among registered counsellors. In addition, this study also reported that registered counsellors scored at a moderate level of multicultural counselling competency and a high level for clinical skills of working with LGBT clients. All in all, based on the findings, this study highlights the importance of addressing multicultural counselling competency and clinical skills in order to ensure the delivery of effective counselling services for LGBT clients by registered counsellors in Malaysia.

Table 1. The Mean and Standard Deviation of Multicultural Counselling Competency and Clinical Skills of Working with LGBT Clients among Registered Counsellors in Malaysia

Variable	M	SD
Multicultural Counselling Competency	2.61	0.31
Clinical Skills of Working with LGBT Clients	4.49	1.09

Note: $m < 2.00$ = Low, $2.00 \leq \text{Moderate} \leq 3.00$, $m > 3.00$ = High

Table 2. Pearson Correlation Coefficient between Multicultural Counselling Competency and Clinical Skills for LGBT Clients

Variable	Clinical Skills for LGBT Clients
Multicultural Counselling Competency	.406**

**Correlation is significant at the $p < .001$

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Kaedah Fuzzy Delphi: Kesahan Kandungan Instrumen Kesejahteraan Psikologi Guru di Organisasi Sekolah (i-OS)

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Abstrak

Kesahan kandungan instrumen adalah penting bagi memastikan item-item yang dibina berupaya mengukur perkara yang sepatutnya diukur dan membincangkan sejauh mana item mewakili kandungan yang dimaksudkan. Kajian ini bertujuan menguji kesahan kandungan Instrumen Kesejahteraan Psikologi Guru di Organisasi Sekolah atau dikenali oleh pengkaji sebagai Instrumen Organisasi Sekolah Sejahtera (i-OS) dengan menggunakan analisis Fuzzy Delphi Metode. Pada peringkat pembinaan item i-OS terdiri daripada 155 item yang dibina berdasarkan empat konstruk utama iaitu Tuntutan Pekerjaan Guru, Sumber Pekerjaan Guru di Sekolah, Sumber Peribadi Guru, dan Kesejahteraan Organisasi Holistik Guru. Reka bentuk kajian adalah kaedah tinjauan kuantitatif dengan menggunakan soal selidik i-OS yang telah diedarkan kepada 12 orang panel pakar. Setiap pakar perlu menentukan tahap kepentingan dan kesesuaian setiap item dengan menggunakan skala Likert 5 mata terhadap empat konstruk bagi setiap item. Data dianalisis dengan menggunakan penomboran segi tiga Fuzzy. Dapatan kajian menunjukkan konsensus pakar terhadap item dalam empat konstruk utama. Dapatan juga menunjukkan 130 item diterima dan melepasi tiga atau dua syarat Fuzzy iaitu nilai threshold (d) tidak melebihi atau sama dengan 0.2, peratus kesepakatan pakar melebihi atau sama dengan 75% dan nilai Defuzzification (alpha cut) melebihi atau sama dengan 0.5. Di samping itu, terdapat lapan item daripada 125 item hanya mematuhi 2 syarat Fuzzy dan diterima dengan pemurnian item berdasarkan cadangan pakar. Implikasi kajian ini adalah dapat memberi sumbangan kepada bidang pengujian dan pengukuran psikologi dan kaunseling serta memberi cadangan kepada kajian lanjutan bagi memastikan kesahan konstruk dan kebolehpercayaan instrumen ini dengan menggunakan pendekatan baharu iaitu teori respon item (TRI).

Kata kunci: *kesahan kandungan; kaedah fuzzy Delphi, pembangunan instrument, kesejahteraan psikologi, organisasi sekolah*

1.0 Pengenalan

Profesion perguruan pada abad ke-21 telah berubah secara drastik. Keadaan ini secara tidak langsung menimbulkan kesan besar kepada kesihatan dan kesejahteraan pekerja disebabkan oleh tuntutan pekerjaan yang tidak terurus (la Velle, 2020). Ini dibuktikan dengan beberapa kajian terkini yang dilakukan sama ada dari dalam dan luar negara bahawa kerjaya sebagai pendidik antara kerjaya yang paling berisiko mengalami tekanan kerja antaranya kajian oleh *The American Institute of Stress* pada tahun 2019 membuktikan bahawa profesion sebagai guru adalah profesion yang paling tertekan dengan pelbagai cabaran semasa sehingga membawa kepada risiko masalah kesihatan yang serius. Turut dibuktikan dengan statistik kajian oleh Universiti Putra Malaysia seramai 71.1 peratus guru di kawasan Lembah Klang mengalami

masalah berkaitan tekanan kerja disebabkan oleh pelbagai faktor persekitaran sekolah (Amin, Amir, & Ismail, 2019).

Manakala laporan Kementerian Pendidikan Malaysia pada tahun 2021 di parlimen menyatakan terdapat 4,360 guru memohon bersara awal atas sebab kesihatan, bebanan tugas, tidak minat, keluarga, dan peribadi. Oleh itu, keperluan kajian semasa adalah tinggi bagi mengenal pasti aspek tuntutan kerja guru, sumber organisasi sekolah, keperibadian guru dan kesejahteraan psikologi guru bagi mengurus intervensi lanjutan seperti pembangunan dan pencegahan kesihatan dan kesejahteraan guru. Dalam usaha tersebut, pembinaan instrumen kesejahteraan psikologi guru di organisasi sekolah (i-OS) khususnya diharapkan menjadi indikator utama dalam mengenal pasti tahap tuntutan kerja guru, sumber organisasi sekolah, keperibadian guru dan kesejahteraan psikologi holistik guru.

Berikutan itu, pembinaan instrumen yang berkualiti perlu memiliki ciri psikometrik yang baik agar instrumen tersebut benar-benar mengukur perkara yang sepatutnya diukur. Kebolehpercayaan sesuatu instrumen adalah ciri psikometrik yang sering dilaporkan, tetapi aspek utama yang perlu diutamakan dalam pembinaan instrumen ialah kesahan muka dan kesahan kandungan (Connell et al., 2018). Kesahan merupakan salah satu syarat penting yang perlu dipenuhi oleh pengkaji dalam pembangunan instrumen kajian (Mohamad et al., 2015). Walaupun instrumen yang dibina mempunyai kebolehpercayaan yang tinggi, namun pengukuran yang dibuat tidak akan tepat sekiranya kandungannya tidak mempunyai kesahan yang memuaskan (Mohammed Afandi et al., 2020). Tujuan artikel kajian ini adalah untuk menunjukkan pengujian kesahan kandungan instrumen i-OS dengan lebih tepat dan terperinci dengan kaedah *fuzzy delphi* (FDM). Dengan kaedah ini kesepakatan pakar dapat dianalisis dan di lapor dengan jelas dan tepat.

2.0 Sorotan Literatur

Kesahan kandungan penting bagi memastikan instrumen yang dibina berupaya mengukur perkara yang sepatutnya diukur dan membincangkan sejauh mana item mewakili kandungan yang dimaksudkan untuk menambah baik item tersebut (American Educational Research Association et al., 2014; Fahmina et al., 2019). Bukti kesahan kandungan perlu dinilai secara berhati-hati serta tertumpu kepada penentuan sama ada instrumen yang dibina adalah cukup untuk digunakan dalam pengukuran (Oluwatayo, 2012). Bukti empirikal untuk kesahan kandungan boleh menjelaskan kecukupan kandungan dalam instrumen yang dibina untuk mewakili konstruk yang diukur (American Educational Research Association et al. 2014). Penilaian pakar sering digunakan untuk para pengkaji mendapatkan bukti penentuan kesahan kandungan yang dibuat. Penilaian pakar terus memainkan peranan dalam amalan pengukuran di pelbagai bidang untuk memastikan kandungan item berupaya mengukur konstruk, jumlah item yang mencukupi, dan kesesuaian skala pengukuran yang digunakan (Finch & French, 2019). Dalam penilaian yang melibatkan beberapa orang panel pakar, setiap pakar menilai setiap item dalam instrumen dan seterusnya membantu pengkaji untuk melaporkan pengubahsuaian yang dibuat berdasarkan penilaian dan cadangan oleh panel pakar (Oluwatayo, 2012).

Terdapat pelbagai kaedah yang telah digunakan secara meluas untuk menentukan persetujuan antara panel pakar berdasarkan pendekatan Teori Ujian Klasik (TUK). Kaedah *Cohen Kappa* mula diperkenalkan pada tahun 1960 untuk mengukur persetujuan antara dua penilai yang menggunakan skala kategori nominal (Cohen, 1960). Kaedah ini mengukur konsistensi antara dua penilai dengan mengecualikan persetujuan antara kedua-dua penilai (Hsu

& Field, 2003). Bagi mengatasi kekurangan kaedah *Cohen Kappa*, kaedah *Fleiss Kappa* telah diperkenalkan pada tahun 1973 untuk menganalisis persetujuan antara lebih daripada dua penilai (Fleiss & Cohen, 1973). Selain itu, kaedah *Fleiss Kappa* menyediakan tafsiran perbandingan statistik yang lebih mudah difahami berbanding kaedah *Cohen Kappa* yang mempunyai kesesuaian nilai yang sukar ditafsirkan untuk menentukan persetujuan antara penilai (Allen, 2017). *Content Validity Index* (CVI) pula merupakan kaedah yang boleh digunakan untuk menentukan kesahan kandungan keseluruhan instrumen yang dikira berdasarkan purata *Content Validity Ratio* (CVR) (Lindell & Brandt, 1999). CVI memberi maklumat secara langsung mengenai persetujuan pakar dengan menukarkan data skala ordinal menjadi dua kategori; contohnya, relevan atau tidak relevan (Polit & Beck, 2006). Terdapat pengkaji yang cenderung untuk menggunakan kaedah CVR kerana berpendapat kaedah ini adalah lebih praktikal, telus, terarah dan mesra pengguna kerana mudah untuk digunakan (Mohammed Afandi et al., 2020). Teori Generalizabiliti (Teori G) telah dibangunkan oleh Cronbach untuk mengukur kebolehppercayaan antara penilai dan mempunyai kelebihan untuk mengasingkan dan menganggarkan pelbagai sumber (Brennan, 2010; Webb et al., 2018). Teori G yang merupakan teori statistik lanjutan daripada TUK yang membolehkan pengiraan kebolehppercayaan lebih tepat berkaitan dengan pengukuran tingkah laku serta boleh menganggarkan pelbagai punca ralat untuk mengira kebolehppercayaan dengan lebih tepat (Nor Mashitah, 2017).

Akhir sekali kaedah *Fuzzy Delphi* (FDM) pula adalah pakar menentukan skala yang sesuai bagi setiap item berdasarkan indikator bagi setiap konstruk. Seterusnya, kriteria persetujuan yang boleh diterima adalah berdasarkan nilai *threshold* tertentu, $(d) \leq 0.2$, peratus persetujuan pakar bagi setiap item $\geq 75\%$ dan nilai *defuzzification* ≥ 0.5 (Chu & Hwang, 2008; Rodgers et al., 2016). Dapatan tersebut boleh dikukuhkan lagi dengan menentukan indeks kesahan kandungan *Aiken's V* dalam julat 0 hingga 1, iaitu kesahan kandungan adalah baik sekiranya nilai indeks *Aiken's V* yang diperoleh adalah tinggi (Aiken, 1985). Pengkaji memilih FDM dalam menganalisis kesahan kandungan dengan menilai kesepakatan pakar melalui tiga pra syarat yang ditetapkan oleh FDM. Kaedah *Delphi* adalah suatu pendekatan yang digunakan dan diterima secara meluas dalam mengumpulkan data bagi sesuatu kajian bersandarkan kepada kesepakatan sekumpulan pakar dalam sesuatu isu yang dikaji (Ahmad et al., 2014). Kekuatan kaedah ini menghasilkan kepelbagaian teknik dalam mendapatkan data yang empirikal seperti kaedah *Fuzzy Delphi* (FDM).

FDM adalah satu kaedah pengukuran yang dilakukan pengubahsuaian berdasarkan daripada kaedah *Delphi* yang telah diperkenalkan oleh Kaufman dan Gupta pada 1988. FDM merupakan kombinasi antara set penomboran *fuzzy* dan kaedah *Delphi* (Yusop, 2013). Ini bermaksud FPM bukan suatu pendekatan baharu kerana FPM berasaskan kepada kaedah *Delphi* klasik di mana responden yang terlibat mesti terdiri dalam kalangan pakar yang arif dalam sesuatu bidang yang sesuai dengan konteks kajian. Penambahbaikan ini secara tidak langsung berupaya menjadikan FDM sebagai suatu pendekatan pengukuran yang lebih efektif dan mampu menyelesaikan masalah yang mempunyai ketidakpastian dan ketidakpastian bagi sesuatu isu yang dikaji. Literatur terdahulu menunjukkan kaedah FDM adalah suatu kombinasi antara kaedah *Delphi* tradisional (klasik) dan teori set *fuzzy* (kabur). Teori set *fuzzy* berfungsi sebagai lanjutan daripada teori set klasik di mana setiap elemen dalam satu set dinilai berdasarkan kepada set *binary* (ya atau tidak) (Zadeh, 1965). Teori set *fuzzy* juga membenarkan taksiran secara beransur-ansur terhadap setiap elemen yang dikaji. Nilai bagi penomboran *fuzzy* adalah terdiri daripada 0 hingga 1 atau dalam selang unit (0, 1) (Asra et al., 2014).

Kajian ini menggunakan FDM bagi mewujudkan faktor utama untuk penilaian setiap item dalam konstruk utama yang berasaskan teori JD-R dan kesejahteraan psikologi dalam instrumen kesejahteraan psikologi guru di organisasi sekolah (i-OS). Penggunaan FDM untuk mencapai kesepakatan daripada dua kategori pakar, iaitu pakar profesional dan pakar lapangan.

Kedua-dua kategori ini adalah terdiri daripada bidang Psikologi Kaunseling, Psikologi Organisasi, dan pembinaan instrumen. Pemilihan kedua-dua kategori pakar ini adalah untuk memilih kriteria yang terbaik bagi pemilihan elemen item dan mengetahui setiap item mengukur elemen atau konstruk yang hendak diukur.

3.0 Metodologi Kajian

Kajian ini adalah berbentuk kajian kuantitatif yang menggunakan aplikasi *Fuzzy Delphi Method* (FDM). Penggunaan FDM adalah untuk mendapatkan kesepakatan pakar terhadap item dalam instrumen kesejahteraan psikologi organisasi sekolah. Kaedah FDM dipilih pengkaji kerana dapat membantu menyelesaikan masalah kekaburan *fuzziness* yang wujud dalam mendapat kesepakatan antara pakar-pakar (Ramlan et al., 2018). Pengkaji juga memilih FDM sebagai kaedah menganalisis data kerana FDM dapat mengatasi kelemahan Kaedah Delphi Tradisional, antaranya (i) Kaedah Delphi tradisional berpotensi mendapat jawapan pada kadar yang rendah dan (ii) Delphi Tradisional juga melibatkan masa yang panjang (Mohd Ridhuan et al., 2015). Selain itu, rasional penggunaan FDM dalam menentukan kesahan kandungan kerana belum ada instrumen pengukuran dalam psikologi yang dibangunkan menggunakan FDM dalam menentukan kesahan kandungan khususnya di dalam negara. Hasil daripada literatur terkini hanya instrumen Indeks Kesejahteraan Psikologi Malaysia (IKPM) oleh Jabatan Perkhidmatan awam (JPA) pada tahun 2019 dan Instrumen Kesejahteraan Psikologi oleh KPM pada tahun 2020 tetapi menggunakan *Content Validity Index* (CVI) dalam menentukan kesahan kandungan.

3.1 Pembinaan Instrumen kajian

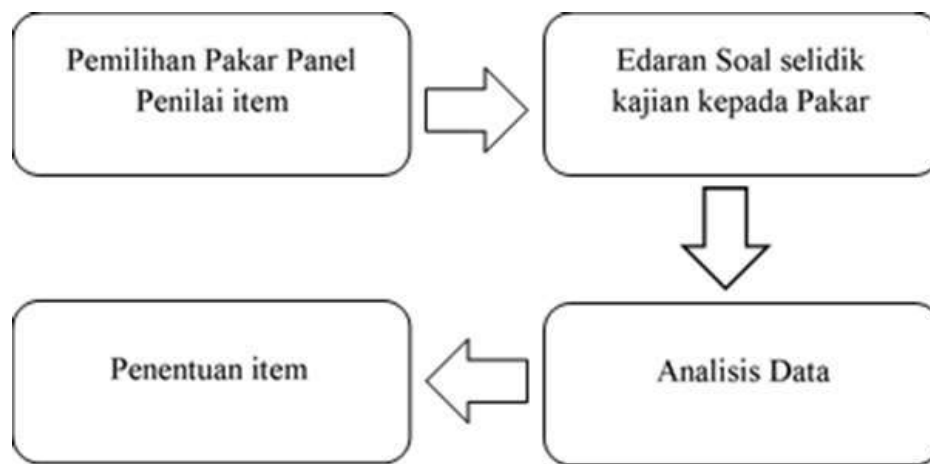
155 item instrumen dibina berdasarkan tinjauan literatur dan definisi operasi setiap konstruk serta indikator yang dicadangkan oleh Demerouti et al., (2001), Alarcon (2011), Christian et al., (2011), Bakker & Leiter (2010), Bill Hettler (1984), Ryff (1989) dan Myers & Sweeney (2004). Pengkaji tentang menjalankan kesahan muka dan Bahasa daripada seorang orang pakar bidang bahasa dan bidang yang berkaitan dengan kajian ini. Di samping itu, pengkaji juga telah mendapatkan khidmat 12 orang pakar untuk mendapatkan kesepakatan pakar dalam item-item yang akan diuji dalam soal selidik ini. Pengkaji menganalisis data kesepakatan pakar menggunakan formula FDM bagi memenuhi tiga syarat utama FDM iaitu (i) nilai *threshold* (*d*) (ii) peratus kesepakatan pakar dan (ii) nilai *defuzzification* (*alpha cut*).

3.2 Proses Pengumpulan Data

Pengkaji menjalankan kajian ini dengan melaksanakan proses pengumpulan data berdasarkan 4 langkah berikut; Langkah pertama dalam proses pengumpulan data menunjukkan pengkaji membuat pemilihan pakar untuk menjawab soal selidik yang telah di bina. Pengkaji telah memilih 12 orang pakar mengikut bidang kajian iaitu bidang Psikologi Kaunseling, Psikologi Organisasi, dan pembinaan instrumen. Pengkaji memilih pakar seramai 12 orang kerana menurut Gordon (1994), bilangan pakar yang sesuai adalah antara 10 orang hingga 30 orang pakar yang tidak seragam (*heterogeneous*). Maklumat pakar yang dikumpul oleh pengkaji dalam kajian ini ialah berkaitan jawatan dan tempat bertugas, pengalaman dan bidang kepakaran. Pengalaman pakar adalah melebihi dari 5 tahun pengalaman. Hal ini bertepatan dengan Akbari dan Yazdanmehr (2014) yang menyatakan pakar adalah individu yang mempunyai pengalaman dalam bidang yang spesifik melebihi tempoh 5 tahun. Seterusnya langkah kedua adalah mengedarkan soal selidik kepada pakar yang dilantik. Pengkaji telah membina satu pautan borang soal selidik secara dalam talian bagi memudahkan pakar menilai dan membuat maklum balas. Pengkaji menghantar pautan borang soal selidik serta surat pelantikan sebagai panel pakar penilai item melalui e-mel. Bersama e-mel tersebut, pengkaji sertakan lampiran maklumat

berkaitan kajian serta definisi setiap konstruk dan sub konstruk sebagai rujukan pakar semasa menjawab soal selidik.

Langkah ketiga adalah menganalisis item-item tersebut dengan menggunakan formula dan syarat FDM pada templet *microsoft excel*. Analisis data FDM hendaklah memenuhi tiga syarat utama FDM iaitu (i) nilai *threshold (d)* tidak melebihi atau sama dengan 0.2 (≤ 0.2), (Chen, 2000) (ii) peratus keseluruhan kesepakatan pakar mestilah melebihi atau sama dengan 75% ($\geq 75\%$) untuk setiap item (Murry & Hammons, 1995; Cheng & Lin, 2002; Chang, Hsu & Chang 2011) dan (ii) nilai *defuzzification (alpha cut)* hendaklah melebihi atau sama 0.5 (≥ 0.5) (Bodjanova, 2006; Tang & Wu, 2010). Akhir sekali adalah proses penentuan kedudukan item adalah dengan cara memilih nilai *defuzzification* berdasarkan kesepakatan pakar yang mempunyai nilai tertinggi ditentukan kedudukan yang paling utama. Rajah 1 pengkaji memaparkan proses pengumpulan data kajian:



Rajah 1: Proses pengumpulan data kajian

4.0 Dapatan Kajian

Hasil dapatan kajian di lapor mengikut konstruk instrumen i-OS (i) tuntutan pekerjaan guru, (ii) sumber pekerjaan guru di sekolah, (iii) sumber peribadi guru, dan (iv) kesejahteraan psikologi holistik guru. Pengkaji akan membincangkan dapatan bagi setiap konstruk dalam instrumen i-OS.

4.1 Konstruk tuntutan pekerjaan guru

Jadual 1 menunjukkan dapatan kajian bagi 27 item pada konstruk tuntutan pekerjaan guru. Dapatan data menunjukkan 21 item mematuhi tiga pra syarat FDM dan diterima dengan nilai *threshold (d)* adalah tidak melebihi atau sama dengan 0.2, peratus kesepakatan pakar melebihi atau sama 75% dan nilai *defuzzification (alpha cut)* melebihi atau sama dengan 0.5. Manakala dua item (item 12 dan 14) hanya mematuhi 2 pra syarat FDM iaitu peratus kesepakatan pakar melebihi atau sama 75% dan nilai *defuzzification (alpha cut)* melebihi atau sama dengan 0.5. Selain itu, empat item (item 5, 19, 21 dan 23) tidak mematuhi tiga pra syarat FDM. Oleh itu, item 5, 19, 21, dan 23 adalah digugurkan. Di samping itu, item 12 dan 14 akan dimurnikan mengikut cadangan pakar.

Jadual 1. Bilangan item yang tidak mematuhi nilai *threshold (d)*, peratusan konsensus pakar, dan *defuzzification (skor A)* bagi konstruk tuntutan pekerjaan guru

Item	Nilai <i>d</i> item	Peratus kesepakatan item	nilai defuzzification (<i>alpha cut</i>)
5	0.38	33%	0.49
19	0.39	42%	0.47
21	0.42	33%	0.48
23	0.45	25%	0.48

4.2 Konstruk sumber pekerjaan guru

Jadual 2 menunjukkan dapatan kajian bagi 36 item pada konstruk sumber pekerjaan guru. Dapatan data menunjukkan 30 item mematuhi tiga pra syarat FDM dan diterima dengan nilai threshold (*d*) adalah tidak melebihi atau sama dengan 0.2, peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (*alpha cut*) melebihi atau sama dengan 0.5. Manakala tiga item (item 28, 52 dan 58) hanya mematuhi 2 pra syarat FDM iaitu peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (*alpha cut*) melebihi atau sama dengan 0.5. Selain itu, tiga item (item 33, 40, dan 41) tidak mematuhi tiga atau dua pra syarat FDM. Oleh itu, item 33, 40, dan 41 adalah digugurkan. Di samping itu, item 28, 52 dan 58 akan dimurnikan mengikut cadangan pakar.

Jadual 2. Bilangan item yang tidak mematuhi nilai threshold (*d*), peratusan konsensus pakar, dan defuzzification (skor A) bagi konstruk sumber pekerjaan guru

Item	Nilai <i>d</i> item	Peratus kesepakatan item	nilai defuzzification (<i>alpha cut</i>)
33	0.30	8%	0.63
40	0.25	67%	0.48
41	0.25	67%	0.48

4.3 Konstruk sumber peribadi guru

Jadual 3. Bilangan item yang tidak mematuhi nilai threshold (*d*), peratusan konsensus pakar, dan defuzzification (skor A) bagi konstruk sumber peribadi guru

Item	Nilai <i>d</i> item	Peratus kesepakatan item	nilai defuzzification (<i>alpha cut</i>)
64	0.32	50%	0.47
73	0.23	83%	0.49
80	0.32	50%	0.47
83	0.23	83%	0.49
86	0.23	83%	0.49
87	0.23	83%	0.49
88	0.23	83%	0.49
91	0.23	83%	0.49
95	0.29	58%	0.46

Jadual 3 menunjukkan dapatan kajian bagi 37 item pada konstruk sumber peribadi guru. Dapatan data menunjukkan 26 item mematuhi tiga pra syarat FDM dan diterima dengan nilai threshold (d) adalah tidak melebihi atau sama dengan 0.2, peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (alpha cut) melebihi atau sama dengan 0.5. Manakala dua item (item 70 dan 97) hanya mematuhi 2 pra syarat FDM iaitu peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (alpha cut) melebihi atau sama dengan 0.5. Selain itu, sembilan item (item 64, 73, 80, 83, 86, 87, 88, 91 dan 95) tidak mematuhi tiga atau dua pra syarat FDM. Oleh itu, item 64, 73, 80, 83, 86, 87, 88, 91 dan 95 adalah digugurkan. Di samping itu, item 70 dan 97 akan dimurnikan mengikut cadangan pakar.

4.4 Konstruk kesejahteraan psikologi holistik guru

Jadual 4 menunjukkan dapatan kajian bagi 55 item pada konstruk kesejahteraan psikologi holistik guru. Dapatan data menunjukkan 45 item mematuhi tiga pra syarat FDM dan diterima dengan nilai threshold (d) adalah tidak melebihi atau sama dengan 0.2, peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (alpha cut) melebihi atau sama dengan 0.5. Manakala satu item (item 153) hanya mematuhi 2 pra syarat FDM iaitu peratus kesepakatan pakar melebihi atau sama 75% dan nilai defuzzification (alpha cut) melebihi atau sama dengan 0.5. Selain itu, sembilan item (item 104, 105, 109, 113, 116, 118, 123, 134 dan 137) tidak mematuhi tiga atau dua pra syarat FDM. Oleh itu, item 104, 105, 109, 113, 116, 118, 123, 134 dan 137 adalah digugurkan. Di samping itu, item 153 dimurnikan mengikut cadangan pakar.

Jadual 4. Bilangan item yang tidak mematuhi nilai threshold (d), peratusan konsensus pakar, dan defuzzification (skor A) bagi konstruk kesejahteraan psikologi holistik guru

Item	Nilai d item	Peratus kesepakatan item	nilai defuzzification (alpha cut)
104	0.23	67%	0.33
105	0.22	75%	0.34
109	0.22	75%	0.34
113	0.22	75%	0.36
116	0.17	58%	0.37
118	0.23	67%	0.34
123	0.28	25%	0.62
134	0.24	67%	0.36
137	0.23	67%	0.34

4.5 Kesahan kandungan keseluruhan

Jadual 5 menunjukkan dapatan rumusan kesahan kandungan mengikut empat konstruk kesemuanya diterima, apabila data menunjukkan purata nilai threshold (d) adalah tidak melebihi 0.2, purata peratus kesepakatan pakar melebihi 75% dan purata nilai defuzzification (alpha cut) melebihi 0.5. Kesimpulannya, fasa pengesahan konstruk hanya dapat diteruskan selepas proses pemurnian item dibuat. Kesahan kandungan bagi instrumen i-OS bukan setakat dibuat secara empirikal, malah mengambil kira konteks rasional bergantung kepada cadangan para pakar bagi mengubah suai item sedia ada supaya menjadi item terbaik sebelum ditadbir kepada sampel.

Jadual 5. Purata kesahan kandungan keseluruhan (n=12)

Konstruk	Bilangan item	Purata nilai d	Purata skor A	Purata % kesepakatan	Status
Konstruk 1: Tuntutan pekerjaan	27	0.19	0.69	85%	Diterima
Konstruk 2: Sumber pekerjaan	36	0.11	0.74	89%	Diterima
Konstruk 3: Sumber peribadi	37	0.15	0.69	85%	Diterima
Konstruk 4: Kesejahteraan psikologi holistik	55	0.14	0.68	86%	Diterima
Julat kepatuhan		≤ 0.2	≥ 0.5	≥ 75%	

Selepas komen dan cadangan para pakar diperhalusi, sebanyak 8 item telah dimurnikan dalam fasa pengesahan. Ini bertujuan untuk menghasilkan item yang lebih tepat mengikut definisi operasi setiap konstruk, menggunakan perkataan yang lebih sesuai dan untuk memastikan item berada dalam konteks, susunan serta maklum balas yang membantu responden dalam pemilihan jawapan atau skala (Oppenheim, 2009). Item-item tersebut ialah item 12, 14, 28, 52, 58, 70, 97, dan 153. Berdasarkan cadangan pakar, bagi item 12 dan 14 pada konstruk tuntutan pekerjaan perlu diubah suai untuk tidak menampakkan bahawa tugas hakiki guru menjadi indikator bebanan tugas guru sebaliknya indikator kekangan masa. Cadangan item 12 adalah ‘Apabila banyak tugas luar sekolah menyebabkan saya menghadapi kekangan masa untuk menyediakan Rancangan Pengajaran Harian.’ Manakala item 14 dicadangkan ‘Apabila banyak tugas luar sekolah menyebabkan saya pulang lewat untuk menyiapkan kerja hakiki di sekolah.’

Selain itu, item 28 juga dicadangkan oleh pakar supaya item ini boleh dikekalkan dan sesuai mengukur konstruk sumber pekerjaan tetapi ia mempunyai persamaan maksud dengan item 23 pada konstruk tuntutan pekerjaan. Memandangkan item 23 digugurkan atas sebab tidak mematuhi prasyarat FDM, maka item ini dikekalkan. Bagi item 52, komen pakar menyatakan bahawa item ini tidak perlu refleksi perasaan terhadap bahan pengajaran, ini kerana konstruk ini ingin mengukur kecukupan kemudahan yang disediakan. Maka cadangan pakar item ini boleh diubah suai kepada ‘terdapat kemudahan bahan pengajaran disediakan’. Item 58, 70, 97, dan 153 diubah suai atas cadangan dan komen berkaitan susunan dan gantian frasa ayat agar lebih mudah fahami oleh responden.

5.0 Perbincangan dan Implikasi Kajian

Hasil dari analisis dengan menggunakan kaedah *Fuzzy Delphi*, pengkaji berupaya mereka bentuk instrumen berasaskan empat konstruk daripada teori J-DR dan Kesejahteraan psikologi. Keputusan analisis menunjukkan pakar bersepakat untuk menerima 130 item yang dengan 8 item daripadanya dimurnikan berdasarkan cadangan pakar. Konsensus pakar juga menunjukkan kesemua nilai item yang diterima dan disepakati adalah tinggi. Hasil analisis ini berupaya menjawab tujuan kajian iaitu terdapat konsensus pakar terhadap item yang diterima di dalam instrumen kesejahteraan psikologi organisasi sekolah (i-OS).

Berdasarkan dapatan kajian, terdapat enam item pada konstruk tuntutan pekerjaan mempunyai nilai *defuzzification (alpha cut)* yang tertinggi iaitu antara 0.75 hingga 0.78. Tiga item yang paling tinggi berada pada sub konstruk pengurusan dan arahan tugas. Manakala tiga lagi item yang paling tinggi nilainya berada pada sub konstruk bebanan tugas. Secara

keseluruhannya, kedua-dua sub konstruk beban kerja dan arahan tugas ini mengukur konstruk tuntutan pekerjaan guru di sekolah. Ini selari dengan dapatan kajian sebelum ini mendapati bahawa bebanan tugas guru (Suhaimi Kamarudin dan Muhamad Suhaimi Taat, 2020) dan arahan tugas yang tidak jelas (Ainsworth & Oldfield, 2019; Garwood et al., 2018; Wu et al., 2020) memberi kesan terhadap tuntutan pekerjaan guru dari segi tekanan emosi dan psikologi. Bagi konstruk sumber pekerjaan guru di sekolah pula item yang paling tinggi nilai *defuzzification (alpha cut)* iaitu antara 0.78 hingga 0.80.

Kesemuanya adalah sepuluh (10) item yang berada pada kedudukan nilai *defuzzification* yang tertinggi. Lima item daripadanya mengukur sub konstruk autonomi, dan selebihnya mengukur item sokongan sosial. Ini bermakna sub konstruk autonomi dan sokongan sosial guru dapat mengukur konstruk utama iaitu sumber pekerjaan guru di sekolah. Autonomi dalam pengajaran juga membolehkan guru-guru lebih kreatif dan inovatif dalam penyediaan dan penyampaian pengajaran dan pembelajaran (PdP) kepada murid dan seterusnya dapat membangun organisasi pendidikan khususnya sekolah. Hal ini disokong dengan dapatan kajian oleh Abdul Jalil Ali et al., (2019) dan Husin (2011), guru-guru di sekolah masih kurang menikmati autonomi dalam PdP atau pengajaran dan pemudahcara (PdPc) jika dibandingkan dengan kajian di luar negara oleh Rudolph, (2016) dan Glatter, (2012).

Item yang paling tinggi nilai *defuzzification (alpha cut)* bagi konstruk sumber peribadi guru adalah antara 0.77 hingga 0.78 dengan sebanyak 15 item. Sembilan item berada pada sub konstruk efikasi sendiri, manakala masing-masing tiga item berada pada sub konstruk optimistik dan motivasi. Secara kesimpulannya sub konstruk efikasi sendiri, optimistik dan motivasi dapat mengukur konstruk sumber peribadi guru. Ini berikutan terdapat juga beberapa kajian lepas menyatakan bahawa terdapat hubungan signifikan efikasi sendiri, tahap daya tahan dan tindak guru dengan tahap kesejahteraan guru di sekolah (Nadia Abd. Razak & Faridah Mydin Kutty, 2021). Selain itu, kajian Mascal, Leithwood, Straus dan Sacks (2008) mendapati bahawa sikap optimistik guru boleh menjadi kesan kepada pembangunan kepelbagaian corak kepimpinan. Apabila guru mempunyai tahap optimistik yang tinggi, guru lebih mudah untuk melibatkan diri secara terbuka dengan rakan sekerja dalam usaha untuk melaksanakan tugas yang diagihkan kepada mereka.

Manakala kajian oleh Arzizul Antin, dan Dg Norizah Ag Kiflee (2018) pula menjelaskan bahawa guru yang mempunyai motivasi tinggi lebih cenderung untuk melaksanakan tugas dengan efisien dan seterusnya dapat mengurangkan beban kerja. Akhir sekali, terdapat 30 item yang mempunyai nilai *defuzzification (alpha cut)* yang tertinggi antara 0.75 hingga 0.77 dalam konstruk kesejahteraan psikologi holistik guru. Kesemua taburan item tersebut berada pada enam sub konstruk yang mengukur kesejahteraan psikologi holistik iaitu kesejahteraan emosi, fizikal, pekerjaan, sosial, intelektual, dan spritual. Dapatan ini selari dengan asas teori dan model pembinaan konstruk kesejahteraan psikologi holistik yang meliputi model enam faktor kesejahteraan psikologi Ryff (1989), model enam dimensi kesejahteraan Bill Hettler (1976), dan model kesejahteraan diri holistik Myers dan Sweeney (2003).

Implikasi kajian ini adalah dapat memberi sumbangan kepada bidang pengujian dan pengukuran psikologi dan kaunseling untuk menentukan kesahan kandungan instrumen yang dibina dengan menggunakan kaedah *Fuzzy Delphi*. Di samping itu, kajian ini juga memberi cadangan kepada kajian lanjutan bagi memastikan kesahan konstruk dan kebolehpercayaan instrumen ini dengan menggunakan pendekatan baharu iaitu teori respon item (TRI).

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The Experiences of School Counsellors in Providing Counselling Services to Students in Malaysia

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Abstract

Recent statistics have revealed a concerning increase in mental health issues among Malaysian children. One of the vital pillars of support systems can be found in the provision of guidance and counselling services by school counsellors. Nonetheless, there exists a significant gap in understanding the experiences of school counsellors providing counselling services to children in the context of Malaysian primary schools. This study aims to explore the experiences of school counsellors in providing counselling to children in Malaysia. The participant must be a registered counsellor under Lembaga Counsellor Malaysia, who has at least two years of working experience as a primary school counsellor, and presently works at a Malaysian primary school. The final number of participants will be determined upon data saturation. The study adopts a qualitative research design that will use semi-structured interviews as the primary method for data collection. A thematic analysis will be employed to analyse the interview responses. The anticipated outcomes are expected to serve as a fundamental basis for shaping policies and practices related to school-based counselling services to improve school-based counselling services, thereby improving support for the overall well-being of children in Malaysia

Keyword: *school-based counselling, school counsellors, Malaysian primary schools, children, qualitative*

1.0 Introduction

In recent years, the mental health and well-being of children and adolescents have become major concerns due to various challenges. These include academic pressure and stress, cyberbullying and online harassment, poverty, and socioeconomic inequalities, as well as exposure to childhood trauma, such as abuse and neglect, family conflict, parenting challenges, and loneliness, all posing significant challenges for students today (Taylor et al., 2017; Twenge & Campbell, 2018). The pandemic has introduced additional stressors, such as the enforcement of social distancing, school closures, economic instability, and heightened parental anxiety, all contributing to an increase in mental health issues among children (Caffo et al., 2020; Viner et al., 2022; Prime et al., 2020). These challenges have led to an escalating prevalence of mental health issues among Malaysian children, as indicated by recent surveys and statistics. According to the latest National Health and Morbidity Survey 2019, approximately 424,000 Malaysian children, accounting for around 8% of those aged 5 to 15, are facing mental health problems, significantly affecting their academic performance, social development, and overall well-being (Ministry of Health Malaysia, 2020).

Despite the recognition of these issues, many children are unable to seek timely help,

emphasising the crucial role of guidance and counselling services, particularly within the education system, in promoting the mental and emotional well-being of children. The Ministry of Education in Malaysia has underscored the significance of school counsellors, mandating the presence of full-time counsellors in both primary and secondary schools (Abdul Rahman, Mohd Isa, & Atan, 2013). However, the roles and responsibilities of school counsellors have become increasingly complex and challenging, with issues such as limited skills, heavy workloads, and a lack of understanding of the counsellor's role highlighted in various studies (Atli et al., 2020; Esin et al., 2020; Sidek et al., 2005). Despite these challenges, the effectiveness of therapeutic interventions for students has been supported by research evidence (Galante et al., 2021; Sagar et al., 2022), emphasizing the need to explore the experiences and challenges faced by school counselors in delivering effective counseling services to students.

2.0 Problem Statement

The history of school guidance and counselling services in Malaysia can be traced back to the 1960s, with an official directive released in 1996 (Surat Pekeliling Ikhtisas Bil. 3/1996) outlining four primary areas of student development: (1) personality development; (2) discipline; (3) career education; and (4) psychosocial and mental health, including psychosocial skills (Atan, 2013; See, 2004). Despite the crucial role of school counsellors, there remains limited research documenting the experiences of Malaysian school counsellors in delivering counselling services to students. The lack of comprehensive data on this topic highlights the need for an in-depth exploration of their experiences, providing valuable insights for enhancing the effectiveness of the service in the future (Amat et al., 2017; See, 2004).

Counselling is recognised as a complex and demanding process, requiring counsellors to adapt their approach to meet each client's specific needs. This is particularly challenging when working with child clients, whose psychosocial and cognitive development levels differ from those of adults (Henderson & Thompson, 2016). Moreover, disparities exist between school-based counselling and counselling outside of school settings. One distinction lies in the limited time available for conducting counselling work in schools. An Indonesian qualitative study revealed that school counsellors often resort to prompt actions due to time constraints (Bustamam et al., 2021). Additionally, school counsellors must navigate additional legal and ethical considerations concerning confidentiality, informed consent, and the reporting of child abuse, which may differ from those in other counselling settings (Glossoff & Pate, 2002).

Therefore, comprehending the experiences of conducting counselling sessions with children in school settings is crucial for gaining a deeper understanding of the counselling process, legal and ethical considerations, counselling theories and techniques, as well as the necessary skills and knowledge. The study's results are particularly valuable, especially for novice primary school counsellors, who often encounter feelings of incompetence, vulnerability, communication challenges with clients, and a lack of emotional resilience (Liang et al., 2019). Currently, there is limited research on the experiences of school counsellors counselling students, and there is a dearth of literature specifically focusing on the experiences of Malaysian school counsellors in primary school settings.

3.0 Objective of Study

The research aims to achieve the following objectives:

- 3.1 To explore the experiences of primary school counselors in delivering counseling services to students in Malaysia.
- 3.2 To outline the challenges encountered by primary school counselors when providing counseling services to students in Malaysia.

4.0 Focus of Research

The participants' inclusion criteria are as follows:

- (a) Being a registered counselor under Lembaga Kaunselor Malaysia.
- (b) Having over two years of experience in primary school counseling.
- (c) Working in Malaysian primary school settings.

5.0 Literature Review

The primary focus of this study is to examine the experiences of school counsellors who provide counselling services to students in Malaysia. This study draws on multiple theoretical frameworks, including contextual School Counseling (CSC), the ASCA National Model, and the philosophy of person-centred school counseling. CSC, based on the principles outlined by Baskin and Slaten (2014), emphasises trust-building, creating healing environments, and facilitating active participation, considering students' emotions, diagnosis, pedagogy, knowledge, and advocacy. The ASCA National Model (2012) underscores the significance of addressing students' academic, career, and personal/social development, guiding Malaysian school counsellors in evidence-based practices. Additionally, the study incorporates the person-centered approach, prioritising congruence, unconditional positive regard, and empathy, allowing students to feel secure and integrate their experiences in the school counselling context. These frameworks collectively contribute to understanding the complexities and valuable experiences of Malaysian school counsellors, enhancing the comprehension of the research participants' insights and justifying their counselling practices.

School-based counselling plays a critical role in reaching children dealing with psychological issues, with the advantage of universal accessibility due to mandatory school attendance. In the US, the Federal Commission on School Safety (2018) emphasises the pivotal role of school counsellors in providing mental health services. Research highlights the growing recognition of mental health counselling in schools (Sanchez et al., 2018). Studies have shown that more school-aged children with anxiety or behavioural issues receive counselling interventions compared to younger children (Ghandour et al., 2019). School counsellors play an essential role in maintaining a conducive learning environment and supporting students facing emotional or behavioural challenges (Cooper et al., 2005; Sun & Stewart, 2007).

The primary responsibility of school counsellors involves providing individual and group counselling services to students (Kementerian Pendidikan Malaysia, 2012). Referrals from various stakeholders, including self-referrals by students, initiate counselling sessions, typically requiring parental consent for minors (Davis, 2015). Effective school counselling services focus not only on academics but also on personal and career development, aligning with the comprehensive guidance and counselling model implemented in Malaysian schools (Razak, Ibrahim, & Azman, 2015). This comprehensive approach underscores the crucial role of school counselling in nurturing students' holistic growth and success.

Bustamam et al.'s (2020) study underscored the challenges encountered by school counsellors in comprehensively addressing the core issues faced by students. Limited time constraints led to a focus on surface-level concerns, hampering the development of trust and effective problem resolution. The absence of specific theoretical frameworks further complicated their efforts, relying instead on lay arguments that potentially hindered effective counseling. An additional study emphasised the need for school counsellors in Aceh to dedicate substantial time to enhancing their problem exploration, definition, and management skills (Pranoto et al., 2019). These findings highlight the importance of investing in the improvement of counselling skills, especially in the areas of problem exploration, definition, and management, to effectively support students.

6.0 Research Methodology

The current study adopts a qualitative research design, specifically employing a descriptive phenomenological method to delve into the lived experiences of school counsellors in Malaysia. According to Burns and Grove (2009), this approach seeks to comprehend and attribute significance to everyday encounters. Employing an interpretivist perspective allows for a comprehensive understanding of school counsellors' diverse viewpoints, offering insights into their experiences providing counselling to students in Malaysia. The use of semi-structured interviews, informed consent forms, and demographic questionnaires aim to gather detailed insights from participants, including their background information and professional experiences.

6.1 Validity and Reliability

To achieve trustworthiness, several strategies will be implemented. Firstly, verbatim transcription of the interview material is conducted, allowing for the original narrations to be revisited. Secondly, member checking is employed to validate the findings and align them with the participants' experiences (Carlson, 2010). Thirdly, peer review is applied to enhance trustworthiness (Dupré, 2012). Colleagues familiar with the research topic and qualitative research methodology provided consultation and feedback, contributing to the researcher's reflexivity and overall research quality. Lastly, triangulation is employed to ensure comprehensive findings. Data triangulation involves collecting data from different sources, individuals, times, and places, as recommended by Gunawan (2015). Through these trustworthiness strategies, the research aims to uphold the quality and reliability of the qualitative findings.

6.2 Research Instrument

The participants are required to answer demographic questionnaires and participate in semi-structured interviews. The demographic information contains gender, age, ethnicity, marital status, educational level, school setting, and years of service in the profession. The interview protocol is developed based on relevant literature in the field of school counselling, focusing on key areas such as counsellors' emotions about their profession, perceptions of students' mental health needs, experiences in providing counselling services, interventions used, competencies, encountered challenges, and recommendations for enhancing school-based counselling services in Malaysia.

7.0 Analysis

The study's analysis involves the thematic analysis approach of the interview transcripts as proposed by Braun and Clarke (2022). The researcher employs a systematic coding process, commencing with open coding to identify common themes and patterns in the data. Subsequently, axial coding is used to compare and consolidate emerging categories across multiple interviews, followed by selective coding to refine and emphasize the core themes while eliminating irrelevant categories. The objective is to develop a comprehensive understanding of the key themes and their interconnectedness in the data, as described by Brinkmann and Kvale (2015).

Potential research themes will be derived from the study's outcomes, encompassing areas such as children's mental health concerns, primary school counsellors' experiences, and challenges within the school counselling domain. One potential theme will focus on the escalating concerns regarding the mental well-being of Malaysian children, analysing the impact of various stressors such as academic pressure, cyberbullying, the effects of the COVID-19 pandemic, and childhood trauma on their psychological welfare. Another theme will delve into

comprehending the viewpoints and experiences of primary school counsellors in Malaysia, elucidating their roles, responsibilities, processes, theoretical approaches, and competencies in delivering counselling services to students. Lastly, a theme will be dedicated to exploring the challenges faced by school counsellors in Malaysia, covering issues such as time constraints, legal and ethical considerations, and the unique demands associated with providing counselling services to children in a school environment.

8.0 Discussion

These findings could contribute to a deeper understanding of the experiences of primary school counsellors in Malaysia, shedding light on the challenges and significance of their roles. By exploring these experiences, the study aims to identify areas for improvement in training and resources, thus contributing to better policies and practices in the education system. Additionally, it can guide future research on the obstacles faced by school counsellors, address gaps in the current literature, and provide practical implications for enhancing counselling services for children. The study's findings can also serve as a valuable resource for researchers in the field, providing a framework for further investigation and potential strategies that can be replicated in various educational settings. Last but not least, the study's results will be beneficial, especially for novice primary school counsellors who often grapple with feelings of incompetence, vulnerability, communication challenges with clients, and a lack of emotional resilience.

9.0 Conclusion

In summary, this study offers valuable insights into the experiences and challenges confronted by primary school counsellors in Malaysia, highlighting their crucial role in addressing the mental health needs of students. The research underscores the significance of understanding the distinctive viewpoints of school counsellors, particularly within the primary school environment. However, it is important to acknowledge the study's limitations, including its reliance on self-reported data and the relatively limited sample size, which may restrict the broader applicability of the findings. To address these limitations, future research should aim to broaden the sample size and incorporate diverse perspectives to achieve a more comprehensive understanding of the subject. Additionally, further studies are warranted to investigate effective strategies and interventions that can enhance the support and resources available to school counsellors, ultimately contributing to the improvement of mental health services for children and adolescents in Malaysia.

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Delving into SSEAYP as a Developmental Context for Youth to Learn, Develop and Thrive: A Conceptual Review

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Abstract

Youth development within program contexts and activities is a significant aspect of contemporary discourse on youth empowerment. This review explores the connection between program context and positive outcomes, focusing on the Ship for Southeast Asian and Japanese Youth Program (SSEAYP). SSEAYP, overseen by Malaysia's National Department of Youth and Sports (JBSN), fosters international exposure, cross-border friendships, and global networks for Malaysian youth. This study investigates how SSEAYP, as a unique program context, promotes positive developmental settings, providing Malaysian youth with opportunities to learn, develop, and thrive. The program strongly emphasizes active youth participation in enriching activities, allowing participants to share their lives, explore diverse cultures, and engage in discussions and exchange activities. These experiences empower youth with fresh knowledge and essential skills, nurturing their individual development and resilience in adolescence. This review sheds light on SSEAYP's potential to facilitate youth learning, skill development, and thriving in an interconnected world. Analyzing the program's impact on Positive Youth Development (PYD) offers profound insights into the role of international youth exchange in shaping the courses of youth and their communities.

Keywords: *program context, youth participation, exchange program, SSEAYP, PYD*

1.0 Introduction

Youth, regarded as a nation's valuable assets, are pivotal for community growth. Nurturing their holistic development underpins youth development, focusing on positive outcomes and their well-being (Zaremohzzabieh et al., 2019). Amidst youth's transitional phase, positive development is paramount. Nations can harness youth's transformative energy by creating nurturing environments for learning, development, and participation (UNDESA, 2020), and they thrive with individual assets and desirable qualities (Qi et al., 2021).

Youth development programs play a strategic role in youth's transformative journey. They encourage youth to explore their interests, take leadership roles, and immerse in growth-conducive communities (Hamilton et al., 2004; Eccles & Gootman, 2002). This concept paper explores the role of international youth exchange programs as a context for promoting Positive Youth Development (PYD) among Malaysian youth. PYD emphasizes strengths, needs, and environmental contexts, guiding youth's growth by building external and internal assets (Kiu Chan, 2021). It is considered a cornerstone in integrating strength-based approaches into youth programs (Shek et al., 2020; Lindsay, et al., 2021). PYD is grounded in relational system developmental theory (Geldhof et al., 2013) that aims to optimize outcomes through youth

programs and policies (Lerner et al., 2013). Malaysia's youth development aligns with the PYD approach, highlighted in the Malaysian Youth Policy (MYP) 2015 (Ministry of Youth and Sports, 2015).

This study explores youth participation in the program, the skills and knowledge they gain, and how the program setting influences their developmental experiences. It aims to reveal how PYD happens in international youth exchange programs, the resulting outcomes, and the strengthening of youth's internal and ecological assets. While student exchange programs are well-studied for their positive impacts on individuals, culture, academics, and careers, research on international youth exchanges (IYEX) is limited. There is a growing need to understand how positive youth development occurs in various program contexts within the broader field of youth development literature.

2.0 Youth Internationalization Initiatives

Youth internationalization, promoting international networking and competencies, is integral to PYD (Ministry of Youth and Sports, 2015). While less common in Malaysia's youth development field two decades ago, strategies like exchange programs, conferences, and volunteer projects now facilitate youth internationalization (National Department of Youth and Sports, 2022).

Exchange programs are a cornerstone of youth internationalization, with variations in context. Ministry of Higher Education (MOHE) focuses on formal education and research-based student mobility programs, while the Ministry of Youth and Sports (MoYS) organizes youth exchange programs based on bilateral/multilateral agreements (McIver et al., 2012; Zulkefli & Zulkifli, 2021). Although targeting the same age group, student mobility and youth exchange programs differ in duration and context; student mobility includes long-term academic exchanges (e.g., Erasmus+) and short-term local educational experiences (e.g., Rotary Youth Exchange) (European Commission, 2017; Rotary International, 2020). Youth exchange programs like the Ship for Southeast Asian and Japanese Youth Program (SSEAYP) offer non-formal learning through engaging activities over two months, emphasizing interactions with host families and communities (Cabinet Office of Japan, 2019).

According to Hamilton (2004), exchange programs empower youth, involving them in responsible roles and diverse development activities. These experiences foster language skills, self-confidence, and adaptability (European Commission, 2022) and enhance cooperativeness, flexibility, and self-management (Cabinet Office of Japan, 2019).

Internationalization initiatives are invaluable for PYD. Initiatives that harness youth's potential and strengths help develop their skills, relationships, and global citizenship (Shek et al., 2019) by enhancing their assets (Kiu Chan, 2021). By seeking to understand the interplay between youth exchange program contexts and positive outcomes, this paper explores how PYD manifests in Malaysian youth participating in SSEAYP.

3.0 What is SSEAYP?

SSEAYP, the Ship for Southeast Asian and Japanese Youth Program, is a unique leadership program focused on communication, networking, and real-life leadership (Youth Development Division, 2022). Conducted by the Japanese government in collaboration with ten Southeast Asian nations since 1974 (Cabinet Office of Japan, 2021), Malaysia actively participated in 46 SSEAYP editions as of 2019.

Under MoYS, SSEAYP does not directly emphasize youth leadership but enables participants to explore their leadership potential and gain essential skills through various

activities. The program promotes friendship, mutual understanding, and broadened perspectives through diverse exchange activities, emphasizing active participation and communal shipboard living to develop knowledge and skills. SSEAYP aims to nurture young leaders capable of contributing to a globalized society. Youth engage in three primary structures: country-based groups, discussion groups (DG), and Solidarity Groups (SG) for recreational and bonding experiences, promoting diverse interactions.

SSEAYP is open to youth aged 18-29 from various backgrounds. Selection in Malaysia involves some assessments (Zulkefli & Zulkifli, 2021) to choose based on their qualities and potential. The program spans 52 days, combining learning with experiential participation through activities like the Discussion Program, Voluntary Activities, cultural events, and social contribution planning (Post-Program Activities). SSEAYP provides a platform for participants to explore and enhance their potential, strengthen social skills, and gain real-world experiences.

4.0 Theoretical Overview and Literature Synthesis

SSEAYP is a structured youth program offering participants a well-defined schedule during their visits to different countries and while on board the ship. One of the most profound aspects of SSEAYP is its role as a cultural melting pot. Youth from diverse backgrounds, representing countries across Southeast Asia and Japan, come together onboard a ship to embark on an exchange journey. This program ensures that all participants can maximize their time abroad by actively participating in diverse activities alongside other youths and adults. It represents a distinctive and significant opportunity for participants to immerse themselves in experiential learning within a multicultural environment while living together onboard the ship.

SSEAYP participants go beyond theory; they immerse themselves in other cultures, sharing daily life with people from diverse backgrounds, which can promote cross-cultural understanding and tolerance. This experience helps them appreciate diversity and grow personally by facing challenges that take them out of their comfort zones. They develop self-awareness, adaptability, resilience, and problem-solving skills (Cabinet Office of Japan, 2019). Furthermore, this experience enhances their self-confidence and competitiveness (Ibnu & Ahmad, 2017) as they navigate these uncharted waters.

In this unique setting, participants expand their cultural understanding by interacting with people from diverse backgrounds. This experience naturally boosts their confidence in communicating across cultures and enhances their cultural competency (Cabinet Office of Japan, 2019; Petrie et al., 2020), which is essential for fostering collaboration in our interconnected world. Participants also develop a vast international network, offering opportunities for personal and professional collaborations and friendships beyond national borders (Jean-Pierre Fench et al., 2013).

SSEAYP broadens horizons through discussions of international issues outlined by the Cabinet Office of Japan. It instills global citizenship and fosters leadership skills through various activities that enhance communication, teamwork, and cultural sensitivity. It instills a sense of global citizenship (Lisko & O'Dell, 2010) and nurtures leadership skills through diverse activities (Cabinet Office of Japan, 2019). These experiences help participants develop essential skills such as communication, public speaking, idea exchange, negotiation, problem-solving, and decision-making. Also, teamwork, leadership styles, and the significance of cultural sensitivity in leadership by learning from their peers and mentors.

Experts like Taylor et al. (2019) and Bradberry & Maio (2018) stressed the value of experiential activities that immerse youth in hands-on participation and encourage peer interaction. Lindsay et al. (2021) highlight that these activities should incorporate elements conducive to PYD, including skill-building, youth engagement, active contribution,

encouragement for self-expression, and a supportive environment. SSEAYP aligns with these principles by emphasizing experientially structured activities.

Experiential learning, as implied by the term, fosters knowledge and human development through direct experience (Kolb, 2015; Hamilton, 1980). Youth must gain knowledge from real-world experiences. Kolb's Experiential Learning Theory (1974; 2015) outlines a dynamic learning cycle involving experience, reflection, thinking, and action. In SSEAYP, participants engage in diverse activities such as group discussions, educational visits, local youth interaction, homestay programs, cultural performances, recreational activities, and community service projects (Cabinet Office of Japan, 2019). These activities prompt participants to engage entirely in new and demanding situations.

Kolb's theory aptly illustrates this process as participants progress through tangible experiences, engage in reflective observation, delve into thoughtful abstract conceptualization, and ultimately embark on active experimentation or further interaction with their peers (Figure 1). At this stage, youth develop their internal strength and enhance the advantages of the ecological assets surrounding them. This environment of individual assets and ecology fosters positive values that contribute to personal growth, family, community, and society (Lerner et al., 2005; 2011; 2015).

By merging concrete experiences gained through participation in activities with abstract concepts and reflecting on the outcomes, youth stimulate various parts of their creative minds, forging stronger connections with the material and their surroundings. When youth engage with new knowledge and their environment, whether with peers or adults, this knowledge becomes tangible through practice during the activity. This process aligns with the developmental system theory, promoting the integration of individual and ecological assets for positive youth development. Youth engage in a mutually beneficial experiential context, SSEAYP, where these individual ↔ context relationships support youth development and social institutions (Lerner, 2004).

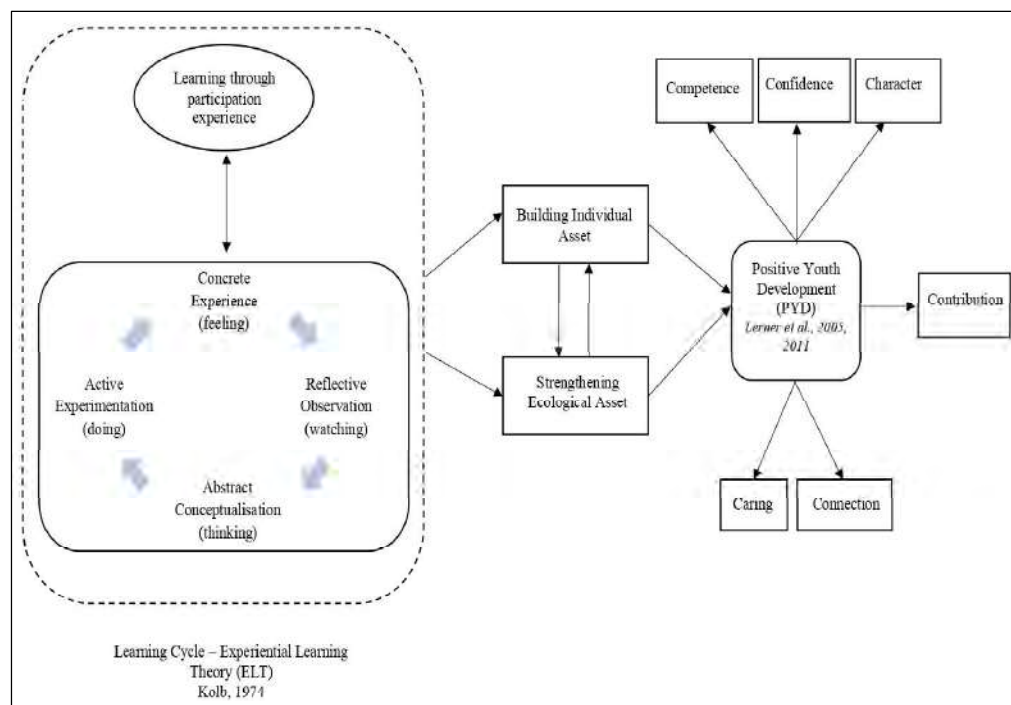


Figure 1. Conceptual Framework of Experientially Learning for PYD

SSEAYP exposes participants to various cultures, languages, and traditions, enhancing their intercultural competence and global awareness. Engaging in discussions, interactions, cultural performances, and leadership roles helps develop valuable skills like effective communication and leadership, boosting their self-confidence and belief in their ability to make a positive impact. The program also creates a vast network of international friendships, enriching their social connections and opening doors to future opportunities and cross-cultural exchanges. Furthermore, participants are involved in community service activities, promoting social responsibility and contributing to community development and social cohesion.

5.0 Implications

SSEAYP demonstrates international exchange programs' potential for fostering PYD. Key program elements like immersive multicultural living, diverse structured activities, and active youth participation cultivate essential skills and global perspectives. Educators and policymakers should leverage such exchanges to empower youth development. Examining other high-impact programs through a PYD lens can illuminate effective youth learning and development strategies.

6.0 Future Works

Further research should explore the long-term PYD impacts of SSEAYP and similar exchanges using longitudinal mixed-methods approaches. Comparing exchanges worldwide could reveal cultural nuances influencing youth experiences. Studies could also examine virtual exchange formats adopted during the COVID-19 pandemic. Evaluating technology's role in remote PYD programs merits attention.

7.0 Conclusion

This conceptual review highlights SSEAYP's strengths as a context facilitating PYD among Malaysian youth. Its immersive environment, experiential activities, and multicultural engagement promote asset-building and skills acquisition. SSEAYP empowers participants to leverage new capacities towards positive ends, exemplifying international exchange's potential for catalysing youth development. A PYD lens provides valuable insights into designing impactful youth programs worldwide.

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Integrating Computational Thinking Skills in Instructional Design: A Lesson Plan and Assessment for Teaching the History of Malacca

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Abstract

This paper presents a lesson plan and assessment for teaching the history of Malacca while integrating computational thinking skills into instructional design. Computational thinking, a problem-solving approach used in computer science, has gained recognition for its potential to enhance students' critical thinking and problem-solving abilities. This paper provides a lesson plan example that demonstrates how computational thinking can be applied in teaching the history of Malacca, including activities such as exploring historical maps, analysing trade data, creating a historical timeline, and presenting findings. Overall, this paper presents a comprehensive overview of the integration of computational thinking in history education and provides practical examples for implementation. The paper concludes with a discussion on the potential benefits and challenges of integrating computational thinking skills into instructional design and suggests future research directions in this area.

Keywords: *computational thinking, history subject, lesson plan, assessment, problem solving, critical thinking*

1.0 Introduction

Computational thinking is a cognitive process that involves problem-solving and analytical skills using concepts from computer science (Gabriele et al., 2019). It is a way of thinking that enables individuals to break down complex problems into smaller, more manageable parts and develop step-by-step solutions (Kafai & Proctor, 2021). Computational thinking is not limited to computer science; it can be applied to various disciplines and everyday life situations (Zhu, 2022). In the context of lesson plan development, computational thinking can bring several benefits. Firstly, it helps teachers design lessons that promote critical thinking and problem-solving skills among students (Gabriele et al., 2019). By incorporating computational thinking into lesson plans, teachers can encourage students to analyse problems, identify patterns, and develop algorithms to solve them (Sung et al., 2017). This approach fosters a deeper understanding of the subject matter and enhances students' ability to think logically and systematically (Weintrop et al., 2015). Furthermore, computational thinking in lesson plan development can promote creativity and innovation (Kafai & Proctor, 2021). It encourages students to think outside the box and come up with unique solutions to problems (Sung et al., 2017).

Computational thinking can be integrated into formative and summative assessment tools to evaluate students' proficiency in this skill. The assessment of computational thinking is still a challenging task due to the lack of a clear definition and operationalization of this construct (González et al., 2019). However, researchers have developed various assessment tools using different approaches and definitions of computational thinking (González et al., 2019). These tools aim to provide convergent measurements and comprehensive evaluations of computational thinking interventions (González et al., 2019). One approach to integrating computational

thinking into assessment tools is through educational computer games. While existing games have focused on theoretical knowledge, there is a need to develop games that also target the development of computational thinking skills (Hooshyar et al., 2020). Additionally, the integration of adaptivity into educational computer games can address individual needs and provide personalised learning experiences (Hooshyar et al., 2020). In the context of summative and formative assessment, it is important to understand the distinction between the two. Summative assessment is used for pass/fail decisions, while formative assessment focuses on providing feedback to students (Khan & Jawaid, 2020). To effectively integrate computational thinking into these assessment tools, a programmatic assessment approach can be adopted. This approach categorises assessments into low, mid, and high stakes, allowing for a comprehensive evaluation of students' computational thinking skills (Khan & Jawaid, 2020).

2.0 Literature Review

Integrating computational thinking into history subject lesson plans can enhance students' engagement, critical thinking, and understanding of the past. In the context of data analysis and visualisation, computational thinking can be applied to analyse and visualise historical data. Students can learn to collect, organise, and analyse data from primary and secondary sources, such as census records, diaries, or historical documents (Mouza et al., 2017). They can use computational tools, such as spreadsheets or data visualisation software, to identify patterns, trends, and relationships within the data. For example, students can create graphs, charts, or interactive maps to visualise population changes, migration patterns, or the spread of historical events. While doing simulations and modelling activities, students can use computational tools, such as simulation software or programming languages, to recreate historical scenarios and test different variables or outcomes (Mouza et al., 2017). For instance, students can create a simulation to understand the impact of different military strategies in a historical battle or simulate the effects of economic policies during a specific time period.

Computational thinking can be integrated into history lesson plans through digital storytelling activities. Students can use computational tools, such as multimedia software or coding platforms, to create interactive presentations, videos, or websites that tell historical narratives (Mouza et al., 2017). They can incorporate multimedia elements, such as images, audio, or video, to enhance their storytelling and engage their audience. This approach allows students to develop their computational thinking skills while also honing their historical research and communication abilities. Computational thinking involves algorithmic thinking, which can be applied to historical problem-solving. Students can be challenged to break down complex historical problems into smaller, manageable steps and develop algorithms to solve them (Mouza et al., 2017). For instance, students can create step-by-step instructions for analysing a historical document or conducting a historical research project. This approach helps students develop logical thinking and problem-solving skills while engaging with historical content. By integrating computational thinking into history lesson plans, educators can provide students with a structured and analytical approach to studying the past. This approach enhances students' ability to analyse historical data, think critically, and develop a deeper understanding of historical events and processes.

The design of assessment frameworks is crucial for the effective evaluation of computational thinking. The Three-Dimensional Integrated Assessment (TDIA) framework is an example of such a framework (Zhong et al., 2015). This framework aims to address the lack of effective approaches to computational thinking assessment by considering three dimensions: knowledge, skills, and attitudes (Zhong et al., 2015). By assessing these dimensions, the TDIA framework provides a more comprehensive evaluation of students' computational thinking abilities (Zhong et al., 2015). In order to assess computational thinking in college students, the development of multidimensional tests based on real-life situations can be beneficial (Kang et al., 2022). These tests can capture the complexity and practicality of computational thinking

skills in various contexts, providing a more accurate assessment of students' abilities (Kang et al., 2022). Furthermore, computational thinking can also be integrated into assessments in other domains, such as energy-efficient programming skills (Anistyasari et al., 2018). By incorporating computational thinking into the assessment of specific skills, students can develop a deeper understanding of how computational thinking can be applied in real-world scenarios (Anistyasari et al., 2018).

3.0 A Lesson Plan and Assessment for Teaching the History of Malacca

Developing an interactive lesson plan for a historical subject requires careful consideration of instructional strategies and the incorporation of engaging activities. To develop an interactive and simple lesson plan for a historical subject, it is recommended to incorporate elements of the historical approach, such as using primary sources, engaging in historical inquiry, and incorporating role-playing or drama activities.

Additionally, considering students' prior knowledge, providing clear learning objectives, and incorporating interactive activities, such as discussions, debates, or group projects, can enhance student engagement and understanding. Figure 1 shows an example of a lesson plan and Figure 2 shows the example of assessment plan for teaching the History of Malacca that integrates computational thinking skills as per below data:

Lesson Plan: Teaching the History of Malacca (Integration of Computational Thinking Skills)

Grade Level: Form 1 (approximately 13–14 years old)

Subject: History

Duration: Three 45-minute class periods

Objective:

- 1) Students will learn about the history of Malacca while developing computational thinking skills.
- 2) Students will apply computational thinking skills, such as data analysis, pattern recognition, and critical thinking, to analyse historical data and events related to Malacca.

Materials:

- 1) Computers or tablets with internet access
- 2) Historical maps, primary sources, and visuals related to Malacca's history
- 3) Spreadsheet software (e.g., Microsoft Excel, Google Sheets)
- 4) Notebooks, writing materials, and drawing materials (colour pencils, markers)

Lesson Plan:**Introduction (10 minutes):**

- Begin by discussing the importance of learning about Malaysia's history and the historical significance of Malacca.
- Explain that this lesson will integrate computational thinking skills to help you understand historical events better.

Activity 1: Exploring Historical Maps (15 minutes):

- Provide students with historical maps of Malacca from different time periods.
- In pairs or small groups, have students examine the maps and identify key landmarks, trade routes, and cultural influences.
- Encourage them to discuss how geography influenced the historical development of Malacca.

CT component: **Pattern recognition.** Students are encouraged to examine the maps and identify key landmarks, trade routes, and cultural influences. By recognizing patterns in the maps, they can gain a better understanding of how geography influenced the historical development of Malacca.

Activity 2: Analysing Trade Data (15 minutes):

- Share historical records or primary sources related to trade in Malacca, such as trade logs or merchant accounts.
- Ask students to use spreadsheet software to create tables and graphs to analyse trade data, including the types of goods traded, trading partners, and trade routes.
- Discuss the patterns and trends they observe in the data and how these contributed to Malacca's prosperity.

CT component: **Abstraction, decomposition and pattern recognition.** Students are asked to use spreadsheet software to create tables and graphs to analyse trade data, including the types of goods traded, trading partners, and trade routes. By analysing the data and identifying patterns and trends, they can understand how trade contributed to Malacca's prosperity.

Activity 3: Creating a Historical Timeline (15 minutes):

- Provide students with a list of key historical events related to Malacca's history (e.g., founding, conquests, cultural exchanges).
- Ask students to create a historical timeline individually or in pairs, incorporating dates, descriptions, and visuals for each event.
- Encourage them to consider the chronological order and the impact of each event on the city's history.

CT component: **Algorithmic thinking.** Students are tasked with creating a historical timeline, considering the chronological order and the impact of each event on the city's history. By organizing the events in a logical sequence, they can better understand the historical progression of Malacca.

Activity 4: Presenting Findings (15 minutes):

- Have students share their historical timelines with the class, explaining their choices of events and visuals.
- Encourage discussion on how computational thinking skills, such as data analysis and pattern recognition, contributed to their understanding of Malacca's history.

CT component: **Abstraction and generalisation.** Students are expected to share their historical timelines with the class, explaining their choices of events and visuals. By presenting their findings, they can demonstrate how computational thinking skills, such as data analysis and pattern recognition, contributed to their understanding of Malacca's history.

Reflection and Discussion (10 minutes):

- Lead a class discussion where students reflect on how computational thinking skills were applied during the lesson.
- Discuss the broader relevance of these skills in historical analysis and other areas of study.

CT component: **Generalisation.** Students are encouraged to reflect on how computational thinking skills were applied during the lesson and discuss the broader relevance of these skills in historical analysis and other areas of study. By reflecting on their learning process, they can develop a deeper understanding of the value of computational thinking in various contexts.

Figure 1: Example of a lesson plan for teaching the History of Malacca

Assessment:

1. Assess students' engagement and participation during the activities.
2. Evaluate the quality of their historical timelines and their ability to apply computational thinking skills.
3. Review the homework assignments for the application of computational thinking in historical research.

Homework Assignment:

1. Assign a homework task where students individually research and write short essays about one aspect of Malacca's history, using computational thinking skills to analyse and present their findings.
2. Students will be given a set of questions related to the topic discussed to answer.
 - Discuss the role of Malacca as a melting pot of cultures during its time as a major trading port. How did this cultural exchange contribute to the development of the city, and what impact did it have on the wider region? Provide specific historical examples to support your answer.
 - Reflect on the enduring legacy of Malacca in modern-day Malaysia. How has the historical significance of Malacca shaped the cultural, economic, and political landscape of Malaysia today? Provide examples of how Malacca's history continues to influence the country's identity and development.

Assessment: the component of computational thinking that is incorporated are **abstraction, algorithm, pattern recognition, decomposition and generalization**. This involves evaluating the quality of the historical timelines created by the students, which requires them to think logically and systematically in organizing and presenting historical information.

Homework Assignment: the component of computational thinking that is incorporated are **abstraction, algorithm, pattern recognition, decomposition and generalization**. Students are required to individually research and write short essays about one aspect of Malacca's history, using computational thinking skills to analyze and present their findings. This involves skills such as problem-solving, data analysis, and logical reasoning to gather and interpret historical information. Both the assessment and the homework assignment emphasize the application of computational thinking skills in the context of historical research and analysis. This helps students develop their ability to think critically, analyze data, and make informed conclusions based on historical evidence.

Figure 2: Example of an assessment plan for teaching the History of Malacca

4.0 Discussion and Conclusion

Integrating computational thinking into history education offers several benefits for students. Firstly, computational thinking equips students with problem-solving strategies that can be applied to historical inquiries. By integrating computational thinking into history education, students develop the ability to analyse complex historical problems, break them down into smaller components, and devise systematic solutions. This approach fosters a systematic and structured approach to problem-solving, enabling students to evaluate the reliability of historical sources, analyse cause-and-effect relationships, and draw evidence-based conclusions. By incorporating computational thinking, students develop a more comprehensive understanding of history and enhance their ability to think critically and analytically (Kafai & Proctor, 2021). Secondly, integrating computational thinking into history education enhances technological literacy. Students gain proficiency in using digital tools and technologies to analyse historical data, create visualisations, and effectively communicate their findings (Mouza et al., 2017). They learn to navigate and evaluate digital resources, use data analysis tools, and effectively communicate historical information using digital platforms.

In today's digital age, computational thinking skills are essential for students to navigate and succeed in a technology-driven world. Developing appropriate assessment methods to evaluate students' computational thinking skills in the context of history education can be challenging. Traditional assessment methods may need to be adapted to assess computational thinking skills effectively. Future research directions in this area could focus on exploring effective instructional strategies for integrating computational thinking into history education. This includes investigating the impact of different pedagogical approaches, such as project-based learning or inquiry-based learning, on students' computational thinking skills and historical understanding. Additionally, research could examine the effectiveness of different assessment methods that incorporate computational thinking in measuring students' historical knowledge and skills. Furthermore, studies could explore the long-term impact of integrating computational

thinking into history education on students' critical thinking abilities, technological literacy, and career readiness.

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Understanding College Success through the Lens of First-Generation Students: An interpretative phenomenological analysis

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Abstract

First-generation college students face unique challenges in navigating the higher education system, and understanding their perceptions of college success is crucial for providing appropriate support. This qualitative study aimed to explore the perceptions of 15 first-generation college students regarding college success and to identify the factors they consider important for achieving success in college. Semi-structured interviews were conducted with the participants, and the data were analyzed using interpretative phenomenological analysis. Four main themes emerged from the analysis. Academic Success encompassed academic performance, skill development, and self-learning. Personal Growth and Well-being highlighted the significance of personal fulfillment, a balanced approach to studying, and the importance of supportive relationships. Career and Professional Development focused on practical skills, knowledge, and networking opportunities. Prospects and Life After College explored participants' perceptions of success beyond college, including transitioning to the next stage of life and continuous personal growth. This study provides valuable insights into the perceptions of first-generation college students regarding college success. The identified themes shed light on the multifaceted nature of success in higher education and highlight the importance of academic achievement, personal growth, career development, and prospects. These findings have implications for supporting first-generation college students and developing targeted interventions to enhance their overall success and well-being.

Keywords: *first-generation college students, college success, academic achievement, personal growth, career development, Prospects, and Life After College*

1.0 Introduction

The pursuit of higher education is a significant milestone for many individuals, offering the promise of personal growth, expanded opportunities, and enhanced career prospects. (Brooks et al., 2021; Fearon et al., 2018). However, the experiences and perceptions of college success can vary among students, particularly among those who are the first in their families to attend college. (Pires & Chapin, 2022). First-generation college students, defined as individuals whose parents or guardians have not attained a bachelor's degree, often faced unique challenges and navigated unfamiliar territory as they strive for success in a college setting (Peralta & Klonowski, 2017; Toutkoushian et al., 2021).

In this study, we aim to explore the perception of college success among first-generation college students. College success, in this context, refers to the subjective evaluation and

interpretation of achievements, progress, and overall satisfaction in the college experience. It encompasses various dimensions, including academic performance, personal growth, social integration, and future aspirations. (Weatherton & Schussler, 2021b) By examining how first-generation students define and perceive their success, we aim to gain insight into their unique perspectives and shed light on the factors that shape their college journey.

2.0 Related literature review

A significant body of literature has explored the experiences and challenges faced by first-generation college students in their pursuit of higher education. Several studies have investigated the impact of being a first-generation student on academic performance, social integration, and overall college experience. For example, several studies found that first-generation students often face unique academic and social hurdles, such as a lack of knowledge about college expectations, limited access to financial resources, and limited social networks for support. These challenges can influence their perceptions of success and hinder their progress in college. (Dean & Kelly, 2020; Ivemark & Ambrose, 2021; Jones et al., 2023) Other studies have explored the experiences of first-generation college students in higher education. For example, a study by Ives and Castillo-Montoya conducted a systematic review of the academic and social challenges that first-generation college students face as they transition into higher education (Ives & Castillo-Montoya, 2020). Another study by investigated first-generation students' perceptions of how their lived experiences have impacted their academic and social integration into college (Herrmann et al., 2022). While these studies have contributed to our understanding of the experiences of first-generation college students, there is still a need to explore how these students define and perceive their success in college.

Here are some additional sources that provide insights into how college success can be defined. Alyahyan and Dustegor (2020) defined student success in terms of academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills, and competencies, persistence, attainment of educational outcomes, and post-college performance. It emphasizes the significance of academic resilience, specifically persistence, in achieving academic success. G. Kuh et al. (2006) research covered include student engagement, academic preparation, and institutional support. The report underscores the importance of student engagement in educationally purposeful activities like internships, research projects, and community service as key contributors to student success. Majid (2017) conducted a study exploring the definition of student success at Sacramento State. The findings revealed administrators' desire for increased collaboration and communication among academic departments to support student success. Additionally, students defined success as the attainment of academic goals, the development of personal and professional skills, and the establishment of meaningful relationships with peers and faculty (Ricks & Warren, 2021). Weatherton and Schussler (2021a) argue that academic definitions of success are relevant and useful within higher education, but alternative views of success should also be considered. The article emphasizes the importance of considering the social context in which students are situated in defining college success. These resources contribute to the ongoing discourse on student success by providing insights into the factors, strategies, and support systems that foster academic achievement, engagement, and persistence. By understanding the multifaceted nature of student success, educators and institutions can tailor their approaches to better support students' holistic development throughout their educational journeys.

Previous studies have focused on the challenges and support mechanisms for these students, but few have explored their subjective perspectives on success. First-generation students face unique academic and social obstacles, such as unfamiliarity with college expectations, financial constraints, and limited support networks. These factors significantly impact their perceptions of success and hinder their college progress. While objective measures of success, like graduation rates and GPAs, have been widely studied, less attention has been

given to the subjective experiences and personal markers of success among first-generation students. Understanding how first-generation college students perceive and define success is of crucial importance for educational institutions, policymakers, and practitioners. By gaining insight into their perspectives, institutions can tailor support services and interventions to better meet the needs of this population. The findings of this study may inform the development of inclusive policies and practices that promote equitable opportunities for all students. Moreover, by amplifying the voices and experiences of first-generation students, this research contributes to the broader conversation on diversity, equity, and inclusion within higher education.

In conclusion, this study aims to explore the perception of college success among first-generation college students. By delving into their unique experiences and perspectives, we seek to contribute to the existing literature, address the research gap regarding subjective perceptions of success, and provide valuable insights for enhancing the educational journey and outcomes of first-generation students.

3.0 Methodology

3.1 Research Design

To investigate the perceptions of college success among first-generation college students in China, this study employed an interpretive phenomenological analysis (IPA) research design. IPA is based on phenomenology, hermeneutics, and concrete IPA, and it aims to explore the innermost deliberations of the "lived experiences" of research participants. It prioritizes understanding how participants personally make sense of their experiences, rather than imposing external interpretations upon them (Smith, 2019). The approach seeks to capture the intricate and profound meanings individuals attribute to specific phenomena, such as college success in the context of this study. By delving into the participants' experiences and the broader significance they assign to those experiences, IPA enables a comprehensive exploration of their understanding of success and the contextual factors that shape it. This method thus facilitates a thorough and nuanced comprehension of how first-generation college students in Chinese universities perceive and conceptualize college success. In summary, IPA is an apt methodology for investigating the perceptions of first-generation college students in Chinese universities regarding college success, as it enables an in-depth examination of participants' perspectives and effectively captures the multifaceted and subtle meanings they associate with this concept (Smith & Fieldsend, 2021).

3.2 Participants

The participants in this study were first-generation college students enrolled in various undergraduate programs at a prominent university in China. In the context of Interpretative Phenomenological Analysis (IPA) research, Smith and Fieldsend (2021) suggest the use of purposeful sampling as a means of recruiting a homogeneous sample of participants. In addition, when recruiting targeted participants using traditional methods proved challenging,) Parker et al. (2019) proposed the use of snowball sampling as an alternative method. Snowball sampling involves first identifying and recruiting several participants who meet the required criteria and then asking them to recommend other participants with similar characteristics.

Therefore, in this study, purposive sampling and snowball sampling were used to enhance participant recruitment. By combining purposive sampling with snowball sampling, the researchers aimed to create a sample that would provide valuable insights into the perceptions of college success among first-generation college students in China. A total of 15 participants (7 males and 8 females) were selected to participate in the study. They were between the ages of 19 and 23 and represented a variety of academic disciplines, including STEM, humanities, and social sciences. The participants' families originated from various regions across China,

providing a breadth of cultural and regional perspectives. The sample size was determined based on the principle of data saturation, where new insights and themes no longer emerge from additional interviews, ensuring sufficient depth and comprehensiveness of the data.

This section presents a comprehensive overview of the participants' age, gender, academic discipline, and regional backgrounds, offering valuable context for understanding their perceptions of college success.

Table 1: Demographic Characteristics of Study Participants

Participant ID	Age	Gender	Academic Discipline	Regional Background
P1	20	Male	STEM	Eastern China
P2	21	Female	Humanities	Southern China
P3	22	Male	Social Sciences	Northern China
P4	19	Female	STEM	Western China
P5	23	Male	Humanities	Eastern China
P6	20	Female	Social Sciences	Central China
P7	21	Male	STEM	Southern China
P8	19	Female	Humanities	Northern China
P9	22	Male	Social Sciences	Western China
P10	20	Female	STEM	Eastern China
P11	21	Male	Humanities	Southern China
P12	23	Female	Social Sciences	Central China
P13	20	Male	STEM	Northern China
P14	19	Female	Humanities	Western China
P15	22	Male	Social Sciences	Eastern China

Table 1 presents the demographic characteristics of the 15 study participants. The participants' ages ranged from 19 to 23, reflecting an even distribution across the age spectrum. In terms of gender, the sample consisted of seven males and eight females, providing a balanced representation. Academic disciplines were diverse, encompassing STEM, humanities, and social sciences. This diversity ensured a breadth of perspectives and experiences related to college success within different disciplinary contexts. Participants hailed from various regional backgrounds across China, including Eastern, Southern, Northern, Central, and Western China. This regional diversity added richness to the study by capturing the influence of regional cultures and socio-economic factors on participants' perceptions of success.

3.3 Data Collection

The data collection process for this study utilized an interpretive phenomenological analysis (IPA) research design to explore the perceptions of college success among first-generation Chinese college students. Semi-structured interviews were the primary method of data collection. The interviews were scheduled at mutually convenient times for the participants and the researcher, and rapport was established before the interviews to create a comfortable and trusting environment. They were conducted in private and quiet locations on the university campus, ensuring confidentiality and minimizing disruptions.

Each interview lasted approximately 45 to 60 minutes, allowing participants to share their perceptions, experiences, and reflections on their college success. Informed consent was obtained from each participant, guaranteeing the confidentiality and anonymity of their responses. The interviews followed an interview guide developed from a review of relevant

literature and research questions. This guide consisted of open-ended and probing questions designed to explore different aspects of participants' understanding of success, factors influencing their definition of success, and their college journey. For instance, participants were asked to define success in their college experience and describe specific experiences or accomplishments they considered successful.

Follow-up questions were utilized during the interviews to elicit more detailed and nuanced responses. These follow-up questions aimed to gain further insight into participants' answers, clarify any ambiguous information, and encourage them to share additional insights. Examples of follow-up questions included requesting specific examples to illustrate their points or asking for further elaboration.

With participants' consent, audio recording devices were used to accurately capture their responses, ensuring that no details or nuances were missed. Additionally, detailed field notes were taken during and immediately after each interview. These field notes documented nonverbal cues, observations, and contextual information, such as participants' body language, mood, and overall demeanor, which contributed to the analysis.

The data collection process continued until data saturation was reached, indicating that new information and insights were no longer emerging from subsequent interviews. In our study, saturation occurred during the 13th interview. However, for additional validation, two more interviews were conducted.

Overall, the data collection process involved conducting semi-structured interviews in private and comfortable settings, following ethical research protocols approved by the university's Institutional Review Board. The use of audio recordings, detailed field notes, and carefully designed interview questions, including follow-up prompts, ensured the accurate capture of participant responses and contextual information for subsequent analysis. Purposeful sampling and snowball sampling techniques were employed to enhance the recruitment of a diverse yet homogeneous sample of first-generation college students from Chinese universities, facilitating a comprehensive exploration of their perceptions of college success.

In addition to interviews, documents (Creswell & Poth, 2016) such as official university records, transcripts, and written assignments were collected and analyzed to provide supplementary information about participants' academic performance, achievements, and progress throughout their college journey. These documents offered an objective perspective that complemented the subjective accounts obtained through interviews. Researchers meticulously reviewed and analyzed these documents, extracting relevant data to enrich their understanding of participants' experiences and perceptions of college success.

Furthermore, memo writing played a significant role in the data collection process (Merriam & Tisdell, 2015). Throughout the study, researchers maintained reflective memos to record their thoughts, observations, and insights gained from interviews and document analysis. These memos facilitated personal reflection, capturing the researchers' interpretations and impressions, which later informed the data analysis and interpretation. The process of writing memos promoted researcher reflection, enhancing the rigor and credibility of the study (Smith, 2019).

3.4 Ethical Considerations

Ethical considerations were carefully addressed throughout the research process (Smith & Fieldsend, 2021). Ethical approval was obtained from the university's research ethics committee before data collection commenced. Participants were assured of the voluntary nature of their participation, the confidentiality and anonymity of their responses, and their right to withdraw

from the study at any point without penalty. All data were de-identified, and pseudonyms were used to protect participants' identities during data analysis and reporting. To ensure the privacy and confidentiality of the participants, all data were stored securely in password-protected electronic files. Only the research team had access to the data, and all members signed confidentiality agreements. Additionally, participants' identities and any identifying information were kept separate from the analysis and reporting process.

4.0 Data Analysis

Bellou, I., Papachristos, N.M., Mikropoulos, T.A. (2018). Digital Learning Technologies in Chemistry Education: A Review. In: Sampson, D., Ifenthaler, D., Spector, J., Isaías, P. (eds) Digital Technologies: Sustainable Innovations for Improving Teaching and Learning. Springer, Cham. <https://doi.org/10.1007/978-3-319-73417-0> The data analysis followed the principles of Interpretative Phenomenological Analysis (IPA) (Smith & Fieldsend, 2021), which involved a systematic and iterative process (Table 2). The audio-recorded interviews were transcribed verbatim, capturing both verbal and non-verbal cues. The transcripts were read and re-read to gain familiarity with the data, immersing the researchers in participants' experiences and narratives. Initial codes were generated through line-by-line coding, where significant statements, phrases, and concepts related to participants' perceptions of college success were identified. These codes were collated and organized into broader themes, reflecting the shared meanings and experiences across participants. The researchers engaged in regular team meetings to discuss and refine the identified themes, ensuring consensus and agreement on the interpretation of the data. The identified themes were further analyzed and explored in-depth. Patterns, variations, and associations within and across the themes were examined, providing a rich understanding of participants' experiences and perspectives. The software NVivo was utilized to assist in organizing and managing the data throughout the analysis process, facilitating efficient coding and retrieval of relevant excerpts.

Table 2: IPA data analysis process

Step1	immersion in the original data
Step2	Exploratory coding
Step3	Development of emergent themes
Step4	Searching for connections across emergent themes and developing individual sub. and superordinate themes.
Step5	Writing up the next interview
Step6	Looking for patterns across accounts
Step7	Developing superordinate themes and writing-up

4.1 Reflectivity and Rigor

To enhance the rigor and trustworthiness of the study, several measures were taken. The researchers engaged in reflexive practices, acknowledging their own cultural and disciplinary backgrounds, biases, and assumptions throughout the research process. Reflexivity was achieved through regular team meetings, where individual perspectives and interpretations were critically examined and challenged (Braun & Clarke, 2019, 2021). To ensure the credibility and validity of the findings, member checking was conducted. Participants were provided with a summary of their interviews and asked to validate the accuracy and interpretation of their responses (Birt et al., 2016). This process allowed participants to confirm, modify, or elaborate

on their original statements, ensuring their voices were accurately represented. Peer debriefing was also employed to seek external input and feedback from colleagues experienced in qualitative research (Morse, 2015). This external review provided valuable insights, and alternative perspectives, and further contributed to the rigor and credibility of the study.

4.2 Results

The qualitative analysis aimed to uncover the rich and nuanced perspectives of first-generation college students regarding their perception of college success. Through in-depth interviews, four prominent themes emerged, representing the shared experiences and interpretations of the participants (Table 3). These themes provide comprehensive insights into how first-generation college students define and perceive success within the college context. The themes are discussed below, accompanied by relevant quotations from the interviews to support and illustrate the findings.

Table 3. College success themes and subthemes.

Themes	Sub-themes
Academic Success	Academic Performance and Achievement
	Skill Development: Academic Skills
	Skill Development: Social Skills
Personal Growth and Well-being	Personal Fulfillment and Happiness
	Relationships and Social Interactions
Career and Professional Development	Practical Skills and Knowledge
	Networking and Professional Relationships
Prospects and Life After College	Transition and Career Opportunities
	Personal Assessment and Growth

4.1 Theme 1: Academic Success

In today's competitive educational environment, academic achievement and attainment play a critical role in assessing student progress and potential. The category Academic Achievement and Achievement delves into the criteria and indicators of academic success. Participants discussed the importance of factors such as GPA and grades as indicators of success, through all subjects as a minimum requirement, and high academic performance as a measure of success. They offered their insights into the challenges they face and the strategies they use to meet these academic success criteria.

Because academics are, after all, college students still in a student phase and GPA is feedback on academic performance, I feel that GPA can be identified as meeting the criteria. (P11)

Because we pay four years of tuition in college, if we don't finish our studies, we are not successful compared to students who have four years of undergraduate studies. (P15)

If you have a high grade in your major, you end up with a high credit score. (P17)

However, two students also expressed that grades are not so important for success in college. One of them said: "I think that after you go to college, you have to come to society after all.

I think grades are only an answer to yourself as a student, and they may reflect your

understanding of the world or how it is, which will help you in society later. (P9)

In addition, participants emphasized the role of information-processing skills in academic achievement and the need for efficient cognitive skills to stand out in academic pursuits. The ability to self-learn for continuous improvement was another key aspect of the discussion, demonstrating the participants' commitment to continuous learning and personal growth.

Competence qualities, of course, include an intake or absorption of your professional knowledge, including say many aspects, such as this and social skills of language and socialization, and then including say information processing, self-learning such methodological skills, so these I think are viewed comprehensively. (P3)

The academic performance and achievement category also encompassed a holistic view of success, recognizing that academic success transcends achievement. Participants recognized the importance of competencies as a prerequisite for academic success, emphasizing the need for a well-rounded set of skills. They also discussed the importance of overall skill development, demonstrating their commitment to improving competencies beyond academic knowledge. *I do think that if we are talking about academic success, we might be thinking in these terms, but I probably prefer that as a successful college student, I think the emphasis is more on the ability to have these skills first, and you don't have these skills, you can't, for example, retrieve information, or read literature, or write academically, and you are going to talk about I think this is also very difficult, I think the ability is a foundation, and then success is the result of the latter (P4).* In addition, participants recognized the significance of publishing as a marker of success, demonstrating their contribution to research and knowledge dissemination. *Academically, in addition, to say merit points, then include that you personally, because we will now also, for example, entering graduate school, have to say published papers, participate in academic forums, or have say related to this academic research achievement above (P3).*

The second category, skills development, emphasizes the acquisition and enhancement of a variety of skills to support academic success. Participants recognized the value of critical thinking, problem-solving, and effective communication as critical skills for success. Language skills were highlighted as key skills to be acquired to enable participants to engage with course material and communicate effectively. In addition, participants emphasized the importance of social skills in the university setting as they acknowledged the role of social interaction, collaboration, and networking in facilitating their academic journey.

Practical knowledge, because nowadays universities honestly have a lot of theoretical knowledge? but the practical application to the workplace still requires you to take the initiative to develop some practical skills yourself. (P8)

After all, the university is a transition stage into society, and then over into society is a group environment, you need to learn how to get along with people, learn from different people, and get more opportunities, I think the success of the university. (P8)

In summary, this theme on academic success explored the multidimensional nature of academic achievement. It includes categories such as academic performance and achievement, focusing on specific criteria and indicators for achieving success, and skill development, emphasizing the acquisition of a variety of skills to support academic success. By understanding and addressing these different aspects, individuals can strengthen their academic journey and pave the way for future achievement.

4.2 Theme 2: Personal Growth and Well-being

The theme of Personal Growth and Well-being explores the important role that personal

fulfillment, happiness, and positive relationships play in the college experience. College is not just about academic success, but also about personal growth, self-discovery, and overall well-being. This theme focuses on two categories: Personal Fulfillment and Happiness, and Relationships and Social Interactions. Through these categories, participants reflect on their experiences and provide insights into how personal growth and well-being contribute to their overall college success and satisfaction.

Personal Fulfillment and Happiness: This category delves into the factors that contribute to personal fulfillment and happiness in the college setting. Participants emphasized the importance of personal achievements in academia as a source of fulfillment. They also highlight the significance of valuing personal interests and maintaining a balanced approach to studying. The recognition of personal fulfillment and satisfaction as essential components of college success is another key aspect discussed by participants. Quotes from participants reflect their perspectives:

"I think personal fulfillment is really important because when you're happy and satisfied with what you're doing, you will perform better academically as well" (p 13).

"I try to find a balance between my academic responsibilities and activities that bring me joy. It's important to prioritize my well-being alongside my studies" (p 9).

Relationships and Social Interactions: This category explores the role of relationships and social interactions in the college experience. Participants discuss the importance of roommate compatibility during the renting process and the impact it has on their well-being. Engaging in extracurricular activities and traveling are highlighted as means of relaxation and unwinding from academic pressures. Participants also reflect on the significance of balancing realistic expectations with societal pressures and the role of supportive friends in defining their success.

"I believe that having supportive friends and a positive social network is crucial for my well-being and success in college. They provide emotional support and motivate me to strive for my goals" (14).

"Success for me is not only about completing my studies but also about forming meaningful relationships and connections with others. It's about building a network that will support me in my personal and professional growth" (P7).

The theme of Personal Growth and Well-being highlights the importance of personal fulfillment, happiness, and positive relationships in the college experience. Participants emphasized the need to balance academic achievements with personal interests and well-being. They recognize personal fulfillment as a significant factor contributing to college success. Additionally, participants emphasize the role of relationships and social interactions, including roommate compatibility, engagement in extracurricular activities, and the support of friends, in shaping their overall well-being and defining their success. This theme underscores the holistic nature of the college journey, emphasizing the importance of personal growth, well-being, and positive connections alongside academic accomplishments.

4.3 Theme 3: Career and Professional Development

The theme of Career and Professional Development explores the importance of preparing for the future and building a successful career during the college years. This theme focuses on two categories: Practical Skills and Knowledge, and Networking and Professional Relationships. Participants share their insights and experiences regarding the significance of practical skills, the value of networking, and the role of professional relationships in shaping their career trajectories.

Practical Skills and Knowledge: This category emphasizes the importance of acquiring practical skills and knowledge alongside theoretical understanding. Participants recognize that learning practical professional knowledge is a primary success factor. They highlight the need to go beyond the curriculum and take the initiative to develop practical skills.

"I believe that learning practical skills is crucial for my future career. It's not just about theoretical knowledge but also about applying that knowledge in real-world situations" (Participant 8).

"Taking the initiative to develop practical skills beyond what is taught in class is essential. It sets us apart and prepares us for the challenges of the professional world" (Participant 11).

Networking and Professional Relationships: This category explores the significance of networking and building professional relationships for career development. Participants emphasized the need to socialize and develop interpersonal skills. They recognize the importance of effectively interacting and cooperating with different individuals. Participants also highlighted the value of gaining diverse perspectives and creating opportunities through networking and social connections.

"I've learned that networking is essential for career growth. It's about building connections and leveraging those connections to create opportunities for us" (Participant 1).

"Engaging in internships, practical experiences, and campus work has allowed me to develop professional relationships and gain valuable insights from people in my desired field" (Participant 8).

The theme of Career and Professional Development highlights the importance of practical skills, knowledge, networking, and professional relationships in shaping successful careers. Participants recognize that practical skills are a primary success factor and emphasize the need to go beyond theoretical knowledge. They emphasize the value of networking, socializing, and developing interpersonal skills to create opportunities and gain diverse perspectives. Engaging in internships, practical experiences, and campus work is also seen as crucial for career development. This theme underscores the proactive approach participants take in preparing for their future careers and the significance of building a strong professional network. By focusing on practical skills and cultivating professional relationships, individuals can enhance their career prospects and set themselves up for long-term success.

4.4 Theme 4: Prospects and Life After College

The theme of Future Prospects and Life After College explores the aspirations, expectations, and preparations individuals have for their post-college lives. This theme is divided into two categories: Transition and Career Opportunities, and Personal Assessment and Growth. Participants share their perspectives on measuring success based on the transition to the next stage of life, career opportunities, personal growth, and finding purpose.

Transition and Career Opportunities: This category focuses on the transition from college to the next stage of life and the career opportunities that individuals strive for. Participants identify various measures of success, such as successfully transitioning to the next stage, obtaining graduate offers from reputable schools, securing well-paying jobs, and having bright prospects. Quotes from participants provide further insights:

"Success for me is successfully transitioning to the next phase of my life, whether it's entering a graduate program or starting my career. It's about taking that next step with confidence"

(Participant 9).

"Getting offers from reputable schools or securing a well-paying job after graduation is a clear sign of success. It gives us a sense of accomplishment and opens doors for future opportunities" (Participant 12).

Personal Assessment and Growth: This category explores the multifaceted nature of success beyond traditional metrics. Participants challenge the notion that GPA alone determines success and highlight the importance of personal goals, continuous personal growth, and finding purpose. They emphasize the value of exploring personal passions and developing a sense of purpose beyond academic achievements.

"I don't believe that GPA is the sole determinant of success. Success in college encompasses academic achievements, finding a job, and building personal relationships. It's about achieving a well-rounded experience" (Participant 6).

"Success for me is not just about reaching a certain milestone. It's about continuous personal growth and development throughout life. It's about pursuing my passions and finding a sense of purpose" (Participant 2).

The theme of Future Prospects and Life After College delves into individuals' aspirations and preparations for their post-college lives. Participants recognize the importance of successfully transitioning to the next stage and securing career opportunities as markers of success. They also challenge the notion that success is solely based on academic achievements or external factors, emphasizing personal assessment, continuous personal growth, and finding purpose as integral to success. This theme highlights the multifaceted nature of success beyond traditional measures, inviting individuals to explore their passions, set personal goals, and cultivate a sense of purpose in their lives. By considering both the practical aspects of transition and career opportunities, as well as the personal dimensions of growth and purpose, individuals can navigate their post-college lives with a sense of fulfillment and direction.

5.0 Discussion

The findings from the four themes provide valuable insights into the experiences and perceptions of female bisexual student-athletes regarding college success. These findings indicate that academic success encompasses more than just grades, with participants emphasizing the importance of overall competence, skill development, and self-learning. Additionally, personal growth and well-being were highlighted as crucial aspects of success, with participants valuing personal achievements, pursuing personal interests, and maintaining supportive relationships. Furthermore, participants recognized the significance of practical skills, networking, and career opportunities in shaping their prospects and life after college.

5.1 Academic Success

The theme of academic success highlighted the multifaceted nature of achieving success in academia (Pascarella & Terenzini, 2005). Participants emphasized the importance of academic performance and achievement, with factors such as GPA, grades, and passing all subjects being recognized as indicators of success (Tadese et al., 2022; York et al., 2015). These findings align with existing literature on college success, where measures such as GPA and grades have been traditionally used to assess student progress (Kuh et al., 2006). However, it was also noted that success in college goes beyond grades, with participants stressing the significance of holistic skill development, information processing abilities, and self-learning for continuous improvement. This aligns with the concept of high-impact educational practices, which emphasizes the importance of engaging students in activities that promote deep learning, critical

thinking, and personal development (Ke et al., 2022; Zhou et al., 2022). Furthermore, the recognition of the importance of publishing papers as a notable achievement within the academic sphere reflects the broader literature on scholarly productivity and its impact on career advancement. These findings suggest that a comprehensive definition of academic success, which encompasses not only grades but also overall competence and skill development, is crucial in supporting the academic journey of first-generation college students.

5.2 Personal Growth and Well-being

The theme of personal growth and well-being emphasizes the importance of personal fulfillment, happiness, and supportive relationships in the lives of first-generation college students. Participants acknowledged the value of personal achievements in academia, the pursuit of personal interests, and maintaining a balanced approach to studying. These findings are consistent with existing literature on college student well-being, which highlights the importance of a holistic approach to success that considers both academic achievements and personal fulfillment (Bi & Li, 2021; Lin, 2023). Engaging in extracurricular activities, building supportive relationships, and taking time for relaxation and travel were seen as crucial for promoting well-being and personal growth. This aligns with research that emphasizes the positive impact of extracurricular involvement (Yao et al., 2023) and social support (Booker et al., 2022; Hoffman et al., 2023) on student well-being and academic success. These findings underscore the need for a holistic approach to college success that considers not only academic achievements but also personal fulfillment and supportive social environments.

5.3 Career and Professional Development

The theme of career and professional development sheds light on the practical skills, knowledge, and networking opportunities necessary for success in the professional realm. Participants recognized the importance of learning practical professional knowledge alongside theoretical concepts and highlighted the need for developing practical skills beyond the curriculum. These findings are in line with existing literature on career readiness and employability skills, which emphasize the importance of both theoretical knowledge and practical skills for successful career outcomes (Benson & Owens, 2022; Green et al., 2023). Moreover, the findings emphasized the significance of networking, socializing, and building professional relationships in facilitating career advancement and gaining diverse perspectives. This aligns with research highlighting the role of networking and social capital in accessing job opportunities and career success (Chan et al., 2022; Yucel et al., 2022). Engaging in internships, practical experiences, and campus work was viewed as valuable for gaining real-world experience and building a strong foundation for professional development. These findings highlight the importance of experiential learning opportunities and practical experiences in preparing first-generation college students for the workforce.

5.4 Prospects and Life After College

The theme of prospects and life after college highlighted the transitional phase and career opportunities that first-generation college students envision for themselves. Participants viewed the successful transition to the next stage of life, obtaining graduate offers from reputable schools, securing well-paying jobs, and having bright prospects as markers of success. These aspirations align with the broader literature on college-to-career transitions and the pursuit of upward mobility (Ding et al., 2023; Kitchen et al., 2023). However, participants challenged the notion that success is solely determined by GPA or external markers. They emphasized the importance of varied goals, including academic achievements, finding a job, and building personal relationships. These findings resonate with research that recognizes the multidimensional nature of success and the importance of individual goals and values in shaping

post-college trajectories (Hirschi & Valero, 2015). Continuous personal growth, exploring personal passions, and developing a sense of purpose were seen as lifelong pursuits that contribute to long-term success and fulfillment.

6.0 Theoretical and Practical Implications

The findings of this study have both theoretical and practical implications that contribute to the understanding of college success among first-generation students. Contribution to the existing literature: This study expands upon the existing literature on college success by providing insights into the perceptions and definitions of success among first-generation college students. The identified themes align with and complement existing theoretical frameworks, such as the multifaceted nature of success and the importance of personal development and holistic learning. Understanding factors shaping the perception of success: By exploring the factors that shape first-generation students' perception of success, this study adds to the theoretical understanding of the complex interplay between individual experiences, cultural contexts, and societal expectations. The findings highlight the significance of considering diverse criteria and individual interpretations when conceptualizing and evaluating college success.

The practical implications of this study are significant for institutions and policymakers seeking to support first-generation college students in achieving success. The identified themes and participants' perspectives offer valuable insights for designing targeted interventions and support systems. Educational institutions can develop programs that focus on personal development, foster positive interpersonal relationships, and promote holistic learning experiences. By addressing the specific needs and challenges of first-generation students, these initiatives can enhance their overall college experience and increase their chances of success. Furthermore, the study's findings guide policy decisions and institutional practices. Policymakers and educational leaders can utilize the insights gained from this study to develop strategies that support the unique needs of first-generation students. This may involve implementing financial assistance programs, establishing targeted counseling services, and offering academic support initiatives.

7. Limitations and Suggestions for Future Research

This study has several limitations that should be considered when interpreting the findings. First, the research was conducted in a specific university in China, which may limit the generalizability of the results to other contexts. Cultural, educational, and societal factors vary across different regions and countries, and these variations may influence first-generation college students' perceptions of success differently. Therefore, caution should be exercised when applying these findings to other settings, and further research in diverse contexts is necessary to obtain a broader understanding of first-generation college students' perceptions of success. Second, the study employed a relatively small sample size. While efforts were made to include participants with diverse characteristics, such as gender, academic majors, and academic performance, the sample may not fully represent the entire population of first-generation college students. The findings should be interpreted within the context of the specific sample, and future studies with larger and more diverse samples would contribute to a more comprehensive understanding of the topic.

Based on the findings and limitations of this study, several avenues for future research can be explored. First, conducting similar studies in different cultural and educational contexts would provide a more comprehensive understanding of first-generation college students' perception of success. Second, longitudinal studies could examine the changes in perception of success over time and explore the factors influencing these changes. Third, quantitative studies could complement the qualitative findings by investigating the relationships between different

factors and the perception of success. Future research should explore different cultural contexts, employ longitudinal designs, and incorporate quantitative approaches to further investigate the factors influencing the perception of success among first-generation college students. By addressing these research gaps, we can gain a more comprehensive understanding of the experiences and needs of this student population and develop effective strategies to support their journey toward success in higher education.

8.0 Conclusion

In conclusion, this qualitative study explored the perceptions of college success among first-generation students. Recapitulating the main findings, the study identified four key themes: academic success, personal growth and well-being, career and professional development, and prospects and life after college. These themes highlight the multifaceted nature of success and provide valuable insights into the experiences of first-generation students. The significance of these findings lies in their contribution to the existing literature on college success. By recognizing the importance of holistic measures of success beyond grades, this study challenges the narrow focus on academic performance and highlights the significance of skill development, self-learning, and overall competence. Additionally, the findings emphasize the importance of personal fulfillment, happiness, and supportive relationships in college success, underscoring the need for a balanced approach to academic and personal development. The findings also have implications for educators, policymakers, and support services. Understanding the multifaceted nature of success can inform the development of interventions and support programs tailored to the unique needs of first-generation students. By incorporating practical skills, networking opportunities, and promoting personal growth, educational institutions can better equip students for future success in their careers and lives beyond college.

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Postgraduate TESL Students' Perceptions Towards the Implementation of Flipped Classroom Pedagogy in English Language Education

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Abstract

With the aspiration from Ministry of Education (MOE) Malaysia's English language initiatives, the need to incorporate technology and interactive classroom activities in teaching and learning has become more imminent. However, the process to improve learning efficiency have yet to rise prominently. Therefore, the study aimed to explore postgraduate TESL students' perceptions towards the implementation of flipped classroom (FC) in English lessons and to investigate their perceptions of the impact FC has on students' engagement, learning process and academic achievement. The study also focused on issues that may hinder the effectiveness of FC. Eighty UPM postgraduate students who enrolled in TESL programme and have working experience within education sectors in Malaysia were involved. The study employed a quantitative data collection method which became the dominant research approach and qualitative approach was used to strengthen the quantitative results. An online questionnaire was administered to the participants followed by a semi-structured interview. Results from the online questionnaire administered revealed that participants have high and positive perceptions in using FC pedagogy while results from the interviews conducted proved that teachers supported their claims with positive attitude in implementing FC. They believed that FC pedagogy increases students' engagement, enhances their learning with interactive FC activities and improves their academic achievement. However, limited technical support, unstable Internet connection, lack of motivation, teachers' readiness, reluctance of students' participation and unfamiliar with FC were discovered as issues that affect its effectiveness. It was concluded that FC benefits both teachers and students and also helps to empower new generation of learners despite the issues identified.

Keywords: *Flipped Classroom Pedagogy, English Language Education, Perceptions*

1.0 Background of the Study

Education is one of the fields that is constantly evolving in order to fulfil students' learning needs. The educational landscape changes to accommodate students' changing learning styles as they have become more interested in new technologies nowadays. This is because people have been exposed to technology since young and everyone is very familiar with using it in their daily lives (Toh et al., 2019; Atas & Çelik, 2019; Tang & Patrick, 2018). In this modern societies, it is believed that the incorporation of technology in language classroom will help students in their learning process. Therefore, teachers are encouraged to use the modern teaching methods in classroom rather than the traditional teaching method where the emphases are merely on content instruction, memorization, and repetition. Among all the modern teaching methods introduced throughout the years, flipped classroom (FC) is one of the most effective

technologies that could be implemented in teaching and learning language classroom.

The concept of ‘flipping’ a traditional classroom environment with technology was first proposed by Lage, Platt and Treglia (2000). This method, commonly referred to flipped classroom or inverted classroom, has switched between what is traditionally conducted for homework with what is traditionally conducted in class. It aligned with Education 4.0 where a teacher’s role has shifted from an instructor or disseminator of information to a facilitator of learning.

This facilitation of learning can occur through questioning, discussion and other structured active learning experiences that enable learners to listen, think, reflect, write, solve problem and create, while getting clarification and guidance from the teachers when needed. FC is used to help students to become independent and creative learners as it is necessary for students to take up the responsibility to captain their own learning ship. Besides, FC has been acknowledged as promoting student-centred learning and it supports various teaching and learning methods such as peer-assisted learning, collaborative learning and problem-based learning. All these pedagogies place the students in the center of the learning process and help them to construct their understanding of a concept through some authentic experiences. Considering the need for effective teaching and learning, educators should implement FC pedagogy in their classrooms, particularly in English lessons.

2.0 Statement of the Problem

According to DeGennaro (2008), researchers claimed that the youngest generation today, known as the Generation Alpha, are learning differently from the previous generations. As a result, educators need to explore ways that can effectively engage young learners in learning by tapping into their technological practices. Teachers in the 21st century need to be proficient in both teaching techniques and subject, as well as in integrating technology in the classroom (Jan, 2017). This makes the teachers’ roles become more difficult as they struggle to not only grab students’ interest and attention in class, but also to engage them in their learning process with the integration of technology.

However, there are still a lot of misconceptions surrounding the use of FC pedagogy in English language classrooms. Some teachers argued that if students do not watch the video lectures or read the reading materials at home before the class, they might not be able to fully participate in the classroom activities as they do not have any idea about the content of the lesson (Johnson, 2013, as cited in Taylor, 2015). In addition, some teachers have mixed feelings about the use of this modern teaching approach due to the fact that both traditional classroom approach and FC pedagogy have its own pros and cons, depending on different conditions such as learning environment, students’ interests and students’ attitudes in learning English. Moreover, there are some teachers who debated on the issue of validity in FC pedagogy in which how effective FC actually works in teaching English language (Zupon, 2017). Thus, the researcher believes that there is a need to carry out this research to prove that FC pedagogy works in English language education.

3.0 Research Objectives

The following are study’s objectives and research questions:

- RO 1: To explore the postgraduate TESL students’ perceptions towards the implementation of flipped classroom pedagogy in English lessons.
- RO 2: To investigate the postgraduate TESL students’ perceptions of the impact flipped classroom pedagogy has on students’ engagement, learning process and academic achievement.
- RO 3: To identify the issues that may hinder the effectiveness of using flipped classroom

pedagogy in English lessons.

4.0 Research Questions

- RQ 1: What are the postgraduate TESL students' perceptions towards the implementation of flipped classroom pedagogy in English lessons?
- RQ 2: What are the postgraduate TESL students' perceptions of the impact flipped classroom pedagogy has on students' engagement, learning process and academic achievement?
- RQ 3: What are the issues that may hinder the effectiveness of using flipped classroom pedagogy in English lessons?

5.0 Research Scope

In the present study, the uniqueness is that its research questions and knowledge generation goals are centered on the implementation of FC pedagogy in English language classrooms. The results provide valuable insights into the influence of FC pedagogy in English language education and contribute to the readers' existing knowledge. The population of this study is UPM postgraduate TESL students who might be English teachers in any educational setting, including primary school, secondary school and university, or they could be school administrators, policy makers and curriculum developers. These postgraduate TESL students includes students who enrolled in Masters and PhDs. This study does not cover other school subjects apart from English language. Postgraduate students from other programmes in Faculty of Educational Studies such as educational psychology, curriculum and instruction or physical education are not within the research scope.

6.0 Literature Review

Information and Communication Technology (ICT) has been introduced and implemented in schools in Malaysia since 1970. The Government of Malaysia started to promote Internet adoption and lead a large-scale program to bring Malaysia into a digital era. ICT serves as a core component in Open and Distance Learning (ODL), and thus education stakeholders started to promote FC especially during the Covid-19 pandemic and lockdown in Malaysia where traditional classroom teaching and learning is replaced by online classes. Therefore, the emphasize of teaching and learning in Malaysian classroom has slowly shifted to FC after the pandemic. Curriculum implementers have also suggested that ICT should be incorporated into the process of English teaching and learning. From the perspective of education, ICT promotes teaching, learning as well as a variety of educational activities in multiple ways (Kent & Facer, 2004).

As cited by Bergmann & Sams (2012), FC is defined as a modern teaching approach with the implementation of technology, in which what was previously done in a traditional classroom is now performed at home, whereas what was traditionally completed as homework is now conducted in a FC as classroom activities. As the name "FC" implies, the time allocated for lecturing in class and the time spent on homework outside the class are currently flipped or reversed in today's classroom. Teachers pre-record the lectures and assign reading materials by uploading them online. Abeysekera and Dawson (2014) pinpointed five characteristics of FC based on the existing definitions and forms of FC as follows:

1. Shifting between in-class time and out-of-class time
2. Activities that conventionally referred to homework are conducted in class; activities that conventionally considered as in-class learning are conducted outside the classroom
3. Involve pre-class activities, in-class activities and post-class activities

4. In-class activities emphasize active learning, cooperative learning, problem-solving and critical thinking skills
5. Integration of ICT in teaching and learning, especially video lectures

While discussing or searching the term FC, another term that comes up frequently is flipped learning (FL). Four basic pillars of F-L-I-P have been proposed and introduced into the classroom practice in order to achieve FL (Flipped Learning Network, 2014).

F - Flexible Environment

L - Learning Culture

I - Intentional Content

P - Professional Educator

Although FC is not a completely new pedagogy in Malaysia and educational stakeholders have attended seminar and training about the integration of online tools in teaching English language, there are still majority of the teachers who never had experience in conducting online classes (Mahalecumy et al., 2022). According to Dhawan (2020), the Covid-19 pandemic has provided a great opportunity to introduce digital learning. During the pandemic, the MOE Malaysia instructed teachers to conduct virtual classes using FC in accordance with the relevant syllabus. In English language education, FC could be implemented in the teaching and learning of all the four language skills, namely reading, writing, listening and speaking skills.

FC benefits each English language skill in different manners. Since language learning is a lifelong process, students should develop language proficiency through the modes of communicative competence which includes grammatical competence, strategic competence, discourse competence as well as sociolinguistic competence. A number of educators have also claimed that English language should take place in both inside and outside of the classroom (Sakulprasertsri, 2017). With the implementation of FC, teachers are allowed to share some reading materials or upload videos about the topic with the students before class and the class time will be fully allocated for the practice of language skills. During class, students can receive direct feedbacks and comments from their peers, and thus they can reflect on their mistakes and improve their overall language proficiency.

7.0 Research Methodology

This study adopted a predominantly quantitative research design and substantiated it with a qualitative research design. The primary source of data is a set of online questionnaires while the secondary source of data is a semi-structured interview. The data collected in semi-structured interview are used to support the data of online questionnaire. The independent variable was the FC while the dependent variable was the students' engagement, learning process and academic achievement.

7.1 Participants

A total of 80 UPM postgraduate TESL students who are working within the education sectors in Malaysia were chosen to answer the online questionnaire via Google Form whereas 8 participants from these sample were selected for the one-on-one semi-structured interview.

7.2 Research Instruments

An online questionnaire and one-on-one interview were used to collect quantitative data and qualitative data respectively. Firstly, the researcher established the initial online questionnaire that suits this study through the adaptation from another research. Subsequently, the initial online questionnaire underwent validation process by two experts from the Faculty of Educational Studies in UPM to test the reliability and validity of the online questionnaire. It was then being modified and finalized. Following this, in-depth one-on-one interview was conducted

with relevant experts to supplement and modify the measurement items.

Online Questionnaire

The platform of the online questionnaire was Google Form, which is a popular and most commonly used web-based platform for researchers to collect quantitative data. All the participants were required to access to the online questionnaire via Google Form and answer all the questions in the form. The format of the online questionnaire in Part B, C and D were in the form of 5-point Likert scale.

The online questionnaire used in this study contained four sections (Part A, B, C and D) as follows:

Part A: (i) Demographic information

(ii) Pre-survey questionnaire

Part B: Implementation of flipped classroom pedagogy

Part C: Impact of flipped classroom on students' engagement, learning and achievement

Part D: Issues that affect the effectiveness of flipped classroom pedagogy

Semi-Structured Interview

A semi-structured pattern of one-on-one interview was used in this study. The semi-structured interview consisted of 7 major questions about the participants' perceptions of the implementation of FC pedagogy in English lessons, perceptions of the use of FC pedagogy in supporting teaching and learning process, problems or issues that may hinder the effectiveness of FC pedagogy as well as suggestions to maximise the effectiveness of FC pedagogy in conducting FC activities. The one-on-one interview were held in an empty lecture or tutorial room in UPM. The time duration for each individual interview were approximately 30 minutes and the interview will be audio-recorded.

8.0 Findings and Discussion

RQ 1: What are the postgraduate TESL students' perceptions towards the implementation of flipped classroom pedagogy in English lessons?

Regarding the data collected from online questionnaire, the overall mean score of postgraduate TESL students' perceptions towards the implementation of FC pedagogy in teaching English was 3.83, which is considered as a moderately high level of perception. Overall, respondents showed positive perception towards the implementation of FC in English language education. According to Ibrahim et al. (2015), the mean values ranged from 3.43 to 4.06 is categorized under moderately high to high level of perception.

According to the result of the interview sessions, all the teachers had positive perceptions and attitudes towards the implementation of FC pedagogy in teaching English language. Teachers expressed that they enjoy using FC pedagogy in English lessons and strongly believed that FC had benefited them as well as their students. The result of interview is in line with the data collected in online questionnaire, which showed positive perceptions among English teachers. Although all the teachers claimed that they have positive perceptions in implementing flipped English classroom, a few teachers have also mentioned that it could be depending on students' education level and proficiency level.

RQ 2: What are the postgraduate TESL students' perceptions of the impact flipped classroom pedagogy has on students' engagement, learning process and academic achievement?

As for the data collected from online questionnaire, the overall mean score of postgraduate TESL students' perceptions towards the impact of FC pedagogy has on students' engagement was 4.13, which is considered as a positive and high level of perception. Additionally, the overall mean score of postgraduate TESL students' perceptions towards the impact of FC pedagogy has on students' learning process was 4.09, which also revealed a high level of

perception. Furthermore, the overall mean score of postgraduate TESL students' perceptions towards the impact of FC pedagogy has on students' academic achievement was 3.87, which is considered as a moderately high level of perception.

The result from the semi-structured interview also illustrates that the implementation of FC pedagogy had a positive impact on English teaching and learning. Teachers from different educational settings, including primary school, secondary school, university and international school, were all expressed the positive impact of FC pedagogy has on their students. Other than the positive impact of FC pedagogy has on students' engagement, learning process and academic achievement, teachers also agreed that FC pedagogy supports teaching and learning, and several teachers stated some other impacts that they think FC pedagogy would bring such as have deeper exploration prior to class, take initiative to do the task, brings excitement and enjoyable as well as more interaction between teachers and students.

RQ 3: What are the issues that may hinder the effectiveness of using flipped classroom pedagogy in English lessons?

Regarding the data collected from online questionnaire, most teachers agreed that the shortage of class time is one of the main issues that hinders them to use FC pedagogy in English lessons (mean = 3.83). Other issues that affect the effectiveness of FC pedagogy include little access to online materials (mean = 3.68), limited ICT technical supports at school (mean = 3.61) as well as limited Internet access among students (mean = 3.31). Respondents also mentioned that teachers encountered different issues when implementing FC pedagogy in English language education.

Based on the result of the interview, all the teachers responded that there are different issues or challenges encountered by teachers when it comes to different educational settings. Meanwhile, teachers reported that different locations of educational settings such as urban area, rural area and suburban area might also influence the effectiveness of implementing FC pedagogy. Some issues mentioned by teachers are unstable Internet connection, lack of devices or gadgets, students' age, students' and teachers' motivation, time spent in preparing the materials as well as teachers' readiness and willingness.

9.0 Conclusions and Implications

It can be concluded that FC benefits both teachers and students, and has positive impact on students' engagement, learning process and academic achievement. FC pedagogy also helps to empower new generation of learners. Although the results have revealed that FC pedagogy is an effective teaching method with the integration of ICT, it also showed that FC pedagogy should not fully replace the traditional method of teaching due to some issues occurred in certain schools, rural housing areas and family backgrounds. However, most teachers still perceived FC pedagogy positively in conducting English lessons despite the issues that they might encountered during the implementation. In order to maximize the effectiveness and learning outcomes of FC activities, some suggestions were given such as provide clear instructions and structure guidance, emphasis on students' collaboration and interactive activities as well as effective class time management. It is evident that educational stakeholders should work together to create a successful education system and produce an effective and enjoyable English language learning environment for students.

One major implication is that, teachers' role in FC has switched from an instructor to a facilitator. In the 21st century classroom, the process of teaching and learning should be student-centred where teachers facilitate and guide them throughout the classroom activities. The focus of teachers' instruction is on the students rather than on the teachers or the subject. When teaching methods are used effectively in a supportive situation, the teaching and learning process will become more successful.

Besides, teachers who have been implementing FC pedagogy in their English classrooms could share their knowledge and personal experiences in using this teaching method during the Professional Learning Community (PLC) sessions in schools. It increases the chances of more teachers trying out this new teaching method when they receive continuous support from different educational stakeholders. Meanwhile, teachers may foster collaboration learning among colleagues and improve their professional development on the ways to successfully maximize the effectiveness and practice of FC pedagogy in English language education.

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Enhancing English Language Proficiency in Chinese EFL Learners Through CAR-SCT Instructional-Based Method: A Conceptual Framework Integrating Sociocultural Theory and Self-Determination Theory in Blended Learning

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Abstract

This conceptual paper presents an integrated framework aimed at improving the English proficiency of Chinese English as a Foreign Language (EFL) students. The proposed framework combines Self-Determination Theory (SDT) and Sociocultural Theory (SCT) in an integrated learning environment known as CAR-SCT pedagogy. This study addresses the need for language education in Chinese primary schools and attempts to develop a robust pedagogical framework to meet the needs of low-level EFL students in Chinese primary schools. Blended learning, an instructional strategy that combines traditional face-to-face classroom instruction with online learning, is the key to the framework. By exploring the relationship between the blended learning approach, the principles of SDT and SCT, and English language proficiency, the framework systematically investigates the complex relationships and mechanisms of action. Principles based on SDT include autonomy, competence, and relevance, which contribute to a deeper understanding of how learners' motivation and self-perception influence their language learning journey in a blended environment. In addition, SCT principles emphasize social interaction, collaborative learning, and cultural relevance, revealing the role of peer interaction and cultural context in language acquisition. The goal of the framework is to determine how the interactions between these variables improve the English language proficiency of primary school students. This study presents the framework to guide future empirical research, providing a way for researchers, educators, and policymakers to collaborate in developing effective language education practices that address the unique needs and cultural contexts of low-level EFL learners in Chinese primary schools. By combining the theoretical insights of SDT and SCT with the practicalities of blended learning, this conceptual framework provides a foundation for transformative language education experiences and outcomes in Chinese primary schools.

Keywords: *Blended Learning; English Language Proficiency; Sociocultural Theory (SCT); Self-Determination Theory (SDT); CAR-SCT Instructional-Based Method*

1.0 Introduction

English language proficiency is crucial in today's globalized world and in China, as the importance of English language proficiency continues to be highlighted, the Chinese government has prioritized the teaching of English and enacted a series of educational reforms aimed at improving English language proficiency across the country to improve the quality of English language teaching and learning outcomes for learners (Fang, 2018). Primary school is

a key stage for acquiring English skills. The significance of English as a foreign language (EFL) being taught in primary schools is particularly significant. The linguistic progress students make at this stage sets the stage for future learning. It is important to cater for low-level learners at this critical juncture as it has a significant impact on their progress and facilitates the establishment of a robust language acquisition trajectory (Qi, 2016; Yang & Chen, 2020). However, existing research on blended learning in language education has mainly focused on the general student population or individuals with higher proficiency levels, ignoring the unique demands and barriers faced by low-proficiency learners (Boelens et al., 2018; Kazakoff et al., 2018). The varying levels of English proficiency among Chinese elementary school students pose a serious challenge for educators. To address this challenge, this conceptual paper presents a comprehensive framework aimed at improving the English language proficiency of low-level EFL students in Chinese primary schools.

The proposed framework called the Culture, Authenticity and Relevance - Sociocultural Theory (CAR-SCT) Instructional-based Method, is based on two well-known educational theories: Self-Determination Theory (SDT) and Sociocultural Theory (SCT). The framework considers the multifaceted nature of language acquisition while recognizing the unique cultural backgrounds of Chinese EFL learners. At the heart of the CAR-SCT framework is the use of blended learning, which combines the strengths of both online and face-to-face training to provide language learners with a wide range of learning experiences and resources. The use of this combination of online and offline helps to increase student engagement, while also providing diverse pathways for language practice and skill development (Albiladi & Alshareef, 2019; Rao, 2019). Blended learning in the context of language education offers a variety of advantages, including a variety of learning experiences, customized learning environments, adaptability, tailored assistance, and higher language proficiency outcomes. By utilizing blended learning, educators can create language learning environments that effectively meet the specific needs of learners, especially those with low language proficiency (Castro, 2019; Rao, 2019; Singh et al. 2021; Yang & Kuo, 2023). This approach can help improve the overall language learning experience of low-level EFL learners in Chinese primary schools.

In this paper, the researcher delves into the theoretical underpinnings, literature review, and practical implications of the CAR-SCT framework, providing insights on how to integrate the principles of SDT and SCT in a blended learning context to improve the language proficiency of Chinese primary school EFL learners. The study also outlines potential research avenues for future collaboration between researchers, educators, and policymakers. By combining the theoretical underpinnings of SDT and SCT with the practicalities of blended learning, the CAR-SCT framework is expected to pave the way for transformative language education experiences and outcomes in Chinese primary schools.

2.0 Theoretical Overview and Literature Synthesis

2.1 Sociocultural Theory (SCT) and Self-Determination Theory (SDT)

Sociocultural Theory places great emphasis on the role of social interaction and cultural context in the process of language acquisition. This theoretical framework posits that language acquisition is not merely a cognitive activity, but rather a socially mediated phenomenon that occurs through meaningful interactions with individuals in a cultural context (Vygotsky, 1978). Contemporary scholarship has drawn attention to the importance of social connectedness in facilitating language skill enhancement and has emphasized the need to consider cultural factors when instructing language learners (Kessler, 2018; Hyland & Hyland, 2019). By incorporating SCT ideas into blended learning approaches, educators can create instructional activities and tasks that promote collaborative learning, social interaction, and the collective construction of knowledge among students. By incorporating SCT into language pedagogy, educators are empowered to create an educational environment that values social interaction, cultural

relevance, and collaborative learning. Blended learning approaches provide an appropriate framework for the application of SCT concepts, facilitating authentic social interaction, cultural inquiry, and collaborative learning experiences. By incorporating the principles of SCT into the implementation of blended learning, educators can create a learning environment that is both supportive and engaging. This approach specifically addresses the sociocultural challenges and demands faced by Chinese learners of English as a Foreign Language (EFL) at lower levels of proficiency. The result is to improve their language learning outcomes.

Self-Determination Theory (SDT) suggests that learners' motivation is influenced by their perceptions of autonomy, competence, and relevance in the learning process (Ryan & Deci, 2000). Autonomy refers to learners' perceptions of their control and agency in the educational process, while competence includes learners' confidence in their ability to succeed. In addition, relevance includes their sense of belonging and inclusion in the social environment. (Lan & Hew, 2020; Chiu, 2021a; Chiu, 2022c). By incorporating SDT ideas into language pedagogy, educators can effectively provide learners with opportunities for self-directed learning, develop their sense of competence, and establish a friendly, inclusive learning environment that ultimately enhances motivation. Blended learning offers a unique potential for applying SDT concepts and enhancing learners' motivation to learn. Incorporating online content into blended learning can enhance learners' sense of control and autonomy in the educational process. In addition, the use of interactive and engaging online materials has the potential to enhance learners' perceptions of their own abilities and mastery. Incorporating SDT principles into blended learning environments can have beneficial effects, particularly in terms of increasing learners' motivation, engagement, and language proficiency (Noels et al., 2020; Chiu, 2021b).

2.2 The Necessity of English Education and Teaching Interventions in Chinese Primary Schools

In today's era of globalization, English is the gateway to international exchange, academic opportunities, and economic development. In recognition of this, China has introduced English language education into the primary school curriculum. Primary education plays an extremely important role in laying the foundation for the development of language skills. Empirical evidence suggests that language proficiency developed throughout primary education, which includes vocabulary acquisition, grammatical comprehension, auditory processing, oral communication, reading skills, and written expression, plays a crucial role in laying the foundation for further linguistic growth and academic achievement (Kuşdemir & Bulut, 2018). The development of proficient language skills at the primary education level lays a solid foundation for further language learning and improved ability to communicate effectively. More notably, the primary school stage is a critical time for students to progress from basic language skills to more complex language activities and academic requirements. Interventions and support provided at this stage have the potential to have a significant impact on learners' language development trajectories in the longer term (García & Frede, 2019; Teng, 2020).

2.3 Blended Learning as a Pedagogical Strategy

Blended learning, which is characterized by combining traditional classroom instruction with online learning content, is gaining prominence in education. It offers flexibility, accessibility, and the opportunity to use technology to enhance the learning experience. Blended learning is aligned with SDT and SCT principles and provides a platform for self-directed learning, social interaction, and cultural relevance. Blended learning can create customized and interactive educational environments, which is particularly beneficial for people with limited language skills. Online components can be customized to the specific requirements of each learner, thus facilitating self-directed learning, providing adaptive feedback, and enabling targeted language practice. In addition, the incorporation of technology enables interactive tasks, such as online discussions, simulation experiences and collaborative tasks, thus promoting learner engagement

and interpersonal communication (Castro, 2019).

Blended learning provides language learners with greater flexibility and accessibility. Incorporating online content into the educational environment allows learners to access learning materials anytime, anywhere, thus giving them the opportunity to review and engage in practice activities at their own pace. The flexibility offered by such language learning programmes allows individuals with different schedules and learning preferences to effectively integrate language learning into their demanding lifestyles. It is also worth noting that online resources have the advantage of being accessible multiple times, thus facilitating learners to reinforce and consolidate their knowledge and competencies during the learning process (Nanjundan & Mariyam, 2020; Panjaitan et al., 2021).

Blended learning facilitates the provision of personalized help and timely feedback to individuals involved in language learning. Online platforms can provide automated assessments and timely feedback, thus helping learners monitor their progress and identify areas for improvement. In addition, educators can use digital communication platforms to provide tailored help, explanations, and encouragement to students outside of traditional classroom time, thus enhancing their educational journey and meeting their unique learning requirements (Castro, 2019; Singh et al. 2021; Yang & Kuo, 2023). According to previous studies, the implementation of blended learning approaches can improve learners' language proficiency. Studies have found that the integration of online resources, interactive activities, and face-to-face instruction has a positive impact on language proficiency, vocabulary development, listening comprehension, and speaking skills (Hashemi & Si Na, 2020; Ehsanifard et al., 2020; Bangkom & Sukavatee, 2021).

2.4 The CAR-SCT Instructional-based Method: Integrating SDT and SCT

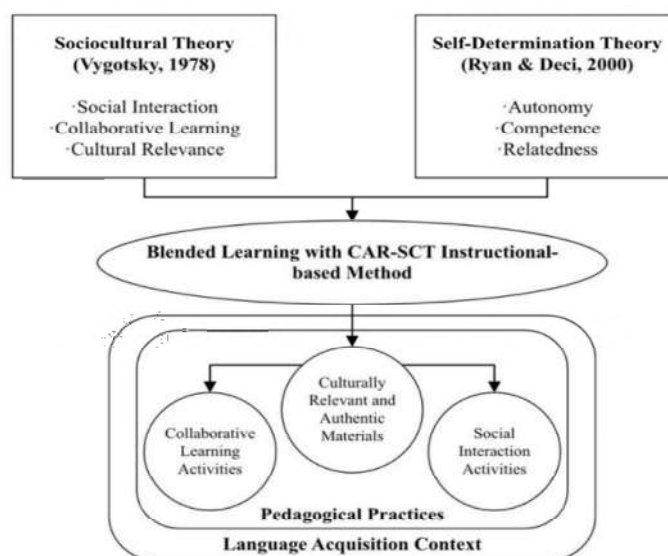


Figure 1. The CAR-SCT instructional-based method: integrating SDT and SCT frameworks

The proposed framework, the CAR-SCT Instructional-based Method based on blended learning, is constructed based on two foundational educational theories: SCT and SDT. The CAR-SCT is a holistic approach to language teaching and learning based on blended learning that combines the principles of SCT with an emphasis on incorporating culture, authenticity, and relevance into the learning experience. On the one hand, it involves the use of culturally relevant authentic

materials, collaborative learning activities, and a focus on social interaction to create a learning environment that reflects real-world language use and engages learners in meaningful language learning. On the other hand, using the psychological framework of SDT for intrinsic motivation and satisfaction of basic psychological needs, the approach focuses on student autonomy, competence, and relatedness to increase student motivation and engagement in the teaching and learning process, which is designed to improve the English proficiency of beginner English language learners (especially those who have low levels of English proficiency) by immersing them in a linguistically rich, culturally relevant, and socially interactive learning environment. It combines traditional face-to-face classroom instruction with online learning content to create a comprehensive, dynamic language learning experience.

3.0 Implications

The CAR-SCT framework provides multiple insights into English language education in Chinese primary schools, aiming to improve English language proficiency, foster intrinsic motivation, incorporate cultural contexts, and provide opportunities for research. One obvious implication is that the CAR-SCT framework helps to improve primary school students' English proficiency. By integrating blended learning, students have access to more learning opportunities and can learn through a variety of resources, which can help improve their listening, reading, writing, and speaking skills. Blended learning provides more personalized learning opportunities and enables students to learn at their own level and according to their needs, leading to better mastery of English. The CAR-SCT framework also focuses on developing intrinsic motivation in students. The principles of SDT encourage students to participate in their learning because they feel that they are the subjects of the learning process and are empowered to make decisions. This helps to sustain students' interest in learning English. Meanwhile, SCT emphasizes that learning is social and that students achieve learning by working with peers and engaging in culturally relevant activities, which also enhances their intrinsic motivation.

The CAR-SCT framework also emphasizes the importance of culture. In China, respecting and integrating students' cultural backgrounds is critical. The framework reminds educators that integrating students' cultural backgrounds into instruction makes learning more meaningful. This not only increases learners' motivation but also enhances their self-identity and makes them more confident in using English. The CAR-SCT framework provides a wide range of opportunities for research. Educational researchers can take this opportunity to conduct empirical studies to assess the effectiveness of the framework in actual primary English language education. This can help identify the most effective pedagogical approaches and thus improve educational practices. At the same time, policymakers can rely on the results of these studies to support the development of more effective English education policies. The CAR-SCT framework provides strong theoretical support for improving English proficiency, fostering intrinsic motivation, integrating cultural contexts, and providing opportunities for research. This framework has great potential to improve students' language learning experiences and outcomes in primary English education in China.

4.0 Future Work

Future work involves empirical research to validate the effectiveness of the framework in improving the English language proficiency of primary school English learners. This research will involve a systematic investigation of the relationships and mechanisms between the independent, mediating and dependent variables within the framework.

5.0 Conclusion

In conclusion, this paper presents an integrated framework based on the CAR-SCT blended learning pedagogy that aims to improve the English proficiency of low-proficiency English learners in Chinese primary schools. By integrating the principles of Self-Determination Theory (SDT) and Sociocultural Theory (SCT) into a blended learning context, the framework aims to foster intrinsic motivation, promote learner autonomy, and optimize language acquisition using cultural contexts. The framework provides a theoretical foundation for transformative language education experiences and outcomes in Chinese primary schools.

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Coupling Coordination Degree Model between the Two Connected Systems: Critical Thinking and EFL Writing

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Abstract

Critical thinking (CT) and writing are both vital competences in the 21 centuries. They are two connected systems that the improvement of thinking can benefit the quality of writing and writing is a medium to reflect and practice critical thinking skills. After collecting the data through the California Critical Thinking Skills Test (CCTST) and IELTS writing test, this research applied the innovative Coupling Coordination Degree (CCD) model to analyze the CCD value between CT skills and writing, which could reflect the degree of their interaction between CT and writing systems. The result shows that the coupling coordination relationship is existed between CT and writing system, and it can be reflected through the CCD value with empirical evidence. It indicates that Chinese EFL learners have difficulties in coupling coordinately using CT and writing. More CT-oriented instructional practices can be developed to enhance the synchronous development of their CT and writing abilities.

Keywords: *critical thinking, EFL writing, coupling coordination*

1.0 Background

Critical thinking (CT) and writing are two vital competences for 21 century EFL learners. Previous studies have already proved the close link between critical thinking (CT) and writing that writing is a medium of reflecting and practicing CT (Vygotsky, 1986; Wade, 1995; Halpern, 2014; Akbari, Seifoori, & Ahour, 2018; Sharadgah, Sa'di, & Ahmad, 2019), and the improvement of critical thinking can benefit the quality of writing (Akbari et al., 2018; Sharadgah et al., 2019; Susilo et al., 2021).

Current studies only stopped at investigating the traditional relationship such as correlation or regression relationship between single variables-CT or writing, while ignoring the interaction between the two systems. This research innovatively applied the entropy method to create a CCD model thus to evaluate the degree of their interaction between CT and writing. Without the cultivation of CT, writing lacks the participant of higher-level thinking that students cannot produce high-quality compositions. Without the application of thinking in writing, students do not know how to combine their thinking in writing.

2.0 Literature Review

2.1 Critical Thinking Skills

The field of CT is commonly associated with a set of high-order cognitive skills (Glaser, 1941; Ennis, 1987; Facione, 1990; Halpern, 1999). The CT skills constructs summarized by Facione and his team are considered a shared definition of CT skills, as they originated from the well-known Delphi Report which united 45 philosophers, scientists, and educators from the United

States and Canada under the American Philosophic Association (APA). The report involved a two-year-long project with multi-round surveys that produced reliable data. Therefore, in this research, the CT skills will tentatively follow the six core CT skills by Facione, namely 1) interpretation, 2) analysis, 3) evaluation, 4) inference, 5) explanation, and 6) self-regulation.

2.2 Thinking in EFL Writing

Paul and Elder (2005) identifies several "elements of thought," including goal, topic, information, interpretation, inference, concepts, assumptions, implications, consequences, and point of view. This model highlights the fundamental components of CT, particularly in a textual or writing setting. Conversely, Facione's CT model emphasizes the generic CT skills that all critical thinkers should possess, regardless of discipline. Paul and Elder also introduce a third component, the intellectual norms underlying the thinking process, which can act as a benchmark for assessing the quality of CT in writing.

2.3 Coupling coordination degree (CCD)

Coupling degree (CD) is a kind of evaluation indicator of coupling relationship which represents the degree of two connected systems' interactions or between the elements included between the targeting systems. Coupling coordination degree (CCD) means the degree of harmony that coordinate between the two system elements (Xie, Xu, & Zhang, 2021). It determines the trend of the system from disorder to order or showed its structure and order when it reaches the critical region (Zhou, 2016; Zhao, Liang, Li, Wang, & Pu, 2021) Coupling coordination degree can be applied in various areas such as economic, ecology, tourism, higher education, psychology and other social science (Stankovski, Pereira, McClintock, & Stefanovska, 2019).

Therefore, through this research, the degree of students' synchronous development of CT and writing can be quantitatively evaluated by the CCD analysis with the following research questions:

- Whether the coupling coordination effects existed between critical thinking (CT) and writing system?
- How is the current situation of Chinese EFL learners' coupling coordination ability of using CT and writing?

3.0 The Design of the Study

With the aim to explore the coupling coordination relations between CT and EFL writing, the researcher collected the pretest and posttest data of participants' CT skills and writing scores at the beginning and the end of the semester, and thus to build a CCD model for further analysis. The results can be reflected through calculating the CCD value and see their classification of coupling coordination level between CT and writing.

3.1 Sampling process

31 first-year English major students participated in this study at one public common university in Hebei Province, China. They are all adults, with an average age of 18. According to the CEFR (Common European Framework of Reference for Languages), their average level is B1 to B2 intermediate level students, and they share a similar educational background. Neither in their L1 education nor in their EFL English education, these pupils have any experience with critical thinking or only very limited knowledge of it. They did not get any particular educational techniques or overt teaching on the principles or practices of critical thinking in the classroom.

3.2 Data Collection Technique

California Critical Thinking Skills Test (CCTST) was used to collect data on participants' critical thinking skills for this study. The CCTST is a widely-used, college-level standardized test that measures cognitive skills related to critical thinking (Facione, 1991). It is an effective tool for measuring instructional effort and allows for the quantitative measurement of improvements in critical thinking skills (Facione, 1991). It was selected for this study due to its strong face validity and quantitative validation in four experiments conducted at California State University from 1989 to 1990.

3.3 Writing Rubric

The International English Language Testing System (IELTS) -academic writing task 2 was selected as the source of writing tasks as it aligns with our requirements to measure candidates' ability to present solutions, justify opinions, analyze evidence, opinions, and ideas critically (ESOL, 2021, p. 6). The Dong's criteria rubric (Dong, 2017) is used to evaluate participants' CT in writing. This holistic rubric is supported by Paul and Elder's CT Standards and is capable of evaluating students' CT in EFL writing products and testing the effectiveness of CT in teaching writing.

3.4 Statistical Analysis <Construction of the indicator system>

According to Facione's CT model, the ability to think critically can be tested through the CCTST, which is comprised of five parts: analysis and interpretation, inference, evaluation and explanation, induction, and deduction. These five indicators serve as authoritative international representation and evaluation indicators of the CT system. Building on this, the writing indicator system was constructed by combining the theoretical foundation of those Elements of Reasoning and Intellectual Standards (Paul & Elder, 2021) with Dong's rubric, which measures thinking in writing. As mentioned in the literature review, this resulted in the creation of nine indicators for the writing indicator system: clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness. These indicators provide a comprehensive framework for evaluating the quality of writing in terms of critical thinking.

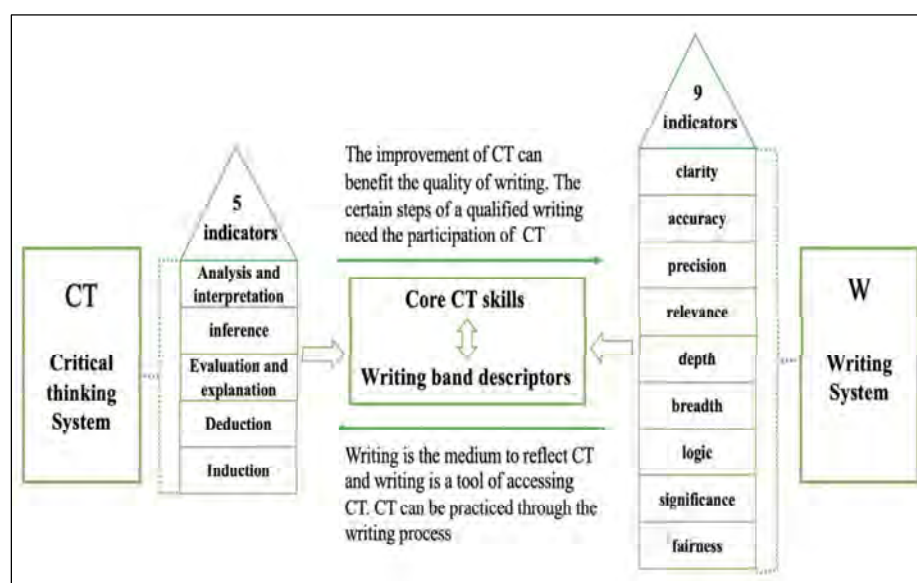


Figure 1. Critical Thinking and Writing (CTAW) analysis framework of the critical thinking system and writing system

It provides implications that teachers and educators could objectively measure students' level of coordinately use of CT and writing by calculating their CCD value by these steps:

- Data pre-processing

To create a comprehensive evaluation index, we standardized the raw data collected from the participants. We applied a formula to remove the impact of dimension and magnitude on the data:

$$\text{Positive indicator: } x_{ij}' = \frac{x_{ij}(x_{ij})}{(x_{ij}) - (x_{ij})} \quad 1 \leq i \leq m$$

$$\text{Negative indicator: } x_{ij}' = \frac{\max(x_{ij}x_{ij})}{(x_{ij}) - (x_{ij})} \quad 1 \leq i \leq m$$

In this formula, x_{ij} stands for the original value of index j in year i , and x_{ij}' means the standardized value of index j in year i . The terms (x_{ij}) and (x_{ij}) represent the maximum and minimum values of index j in year i , respectively.

- Weight determination (The entropy method)

Further, the weight of each layer in the system index can be represented by the proportion of the indicator j in the year i (P_{ij})

$$P_{ij} = X'_{ij} / \sum_{i=1}^n X'_{ij}$$

Calculating the entropy of each indicator j (E_j)

$$E_j = -K \sum_{i=1}^n P_{ij} \ln P_{ij}$$

Where $K = 1/\ln(n)$

$0 \leq E_j \leq 1$

When $P_{ij}=0$, let $\ln P_{ij}=0$

(n is the number of years, and m represents the number of indicators in a subsystem)

Calculating the entropy redundancy (D_j)

$$D_j = 1 - E_j$$

Calculating the weight of each indicator j (W_j)

$$W_j = D_j / \sum_{j=1}^m D_j$$

- The comprehensive evaluation index calculation

$$S_j = \sum_{j=1}^m W_j \times x_{ij}'$$

$$C_n = [(u_1 \times u_2 \times \dots \times u_m) / \prod (u_i + u_j)]^{1/n}$$

Coupling Coordination Degree (CCD) based on the coupling degree to form a comprehensive model. Specifically, the CCD model for the CT (S1) and writing (S2) systems can be expressed as follows:

$$D_{(t)} = \sqrt{T} \times C_t$$

$$T = \alpha S(1, t) + \beta S(2, t)$$

Here, the comprehensive coordination index of the systems is denoted by T , which reflects the overall synergistic effect of each system. The coefficients α and β are undetermined and represent the relative weights of the coupling between the two systems. Since both systems are in an equal status, this research takes $\alpha = \beta = 0.5$, as suggested by Ai (2016), Xie et al. (2021), and Zhao et al. (2021).

- The level and classification of CCD

Table 1. The 10-level classification system of CCD

Coupling coordination degree (CCD)	Coordination level	Classification
Uncoordinated development $0 \leq D_t < 0.4$	[0,0.1)	Extremely uncoordinated
	[0.1,0.2)	Seriously uncoordinated
	[0.2,0.3)	Moderately uncoordinated
	[0.3,0.4)	Slightly uncoordinated
Transformation development $0.4 \leq D_t < 0.6$	[0.4,0.5)	On the verge of uncoordinated or mildly imbalanced
	[0.5,0.6)	Barely coordinated or weak coupled coordinated
Coordinated development $0.6 \leq D_t \leq 1$	[0.6,0.7)	Slightly coordinated
	[0.7,0.8)	Moderately coordinated
	[0.8,0.9)	Well-coordinated
	[0.9,1]	High-quality coordinated

4.0 Results

Upon analysing the data from the pre and post-test results, which assess the participants' CT skills level and their thinking in writing, the CCD results of the entire class were calculated using the coupling coordination method. Firstly, the basic characteristics of the students' CCD level for the two systems will be explained in the following section, and subsequently, the changes in the two sets of results will be analysed by comparing the number of different classification groups. To facilitate better analysis, the specific number of each range group was calculated from the raw data results, as presented in the Table 2.

Table 2. The number of different classification groups

Coupling coordination degree (CCD)	Coordination level	Before the semester		After the semester		Classification
Uncoordinated development $0 \leq D_t < 0.4$	[0,0.1)	10	0	5	0	Extremely uncoordinated
	[0.1,0.2)		0		0	Seriously uncoordinated
	[0.2,0.3)		2		1	Moderately uncoordinated
	[0.3,0.4)		8		4	Slightly uncoordinated

Transformation development $0.4 \leq D_t < 0.6$	[0.4,0.5)	14	7	16	8	On the verge of uncoordinated or mildly imbalanced
	[0.5,0.6)		7		8	Barely coordinated or weak coupled coordinated
Coordinated development $0.6 \leq D_t \leq 1$	[0.6,0.7)	7	5	10	6	Slightly coordinated
	[0.7,0.8)		2		3	Moderately coordinated
	[0.8,0.9)		0		1	Well-coordinated
	[0.9,1]		0		0	High-quality coordinated

The findings indicate that the majority of university students have a low level of coordinated ability in using the CTAW system. Approximately 70% of students lack the ability to coordinate their CT and writing skills, highlighting an imbalance in the development of CT and writing systems (Wan Hussin, Harun, & A Shukor, 2019). The number of students in uncoordinated group decreased from ten to five and coordination group students increased from 7 to 10, indicating that some students in this group were able to improve their coordinated ability in using CT and writing. This improvement may be attributed to the CT-oriented instruction provided by the instructor.

This study supports the idea that writing and critical thinking are closely related and that their balanced development is essential for effective writing. The CCD analysis provided a comprehensive evaluation model of the critical thinking and writing system (CTAW), which can be used to examine the coupling coordination effects between the two systems. This study suggests that proactive measures, such as CT training, can help students develop their CT and writing skills in a synchronized and balanced way.

Therefore, it is essential for educators, policy makers, and teachers to address this issue and explore effective solutions. The results demonstrate that one-semester CT-oriented instructional intervention can improve students' coordinated use of CT skills and writing ability. This highlights the positive effects of CT instruction on enhancing students' balanced development in both capabilities (Akbari et al., 2018).

Abbreviations

CT: Critical thinking

CCTST: California Critical Thinking Skills Test

CCD: Coupling Coordination Degree

CEFR: Common European Framework of Reference for Languages

IELTS: The International English Language Testing System

CTAW: critical thinking and writing

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A Job-Demands Resources Perspective on University Administrators' Burnout in China: The Role of Emotion Regulation

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Abstract

The imbalance or balance between job resources and demands is essential for the prediction of job burnout in individuals. Nevertheless, prior research has commonly neglected the roles of university administrators with emotional and interpersonal stressors. Survey data were collected from 530 university administrators in China via Structural Equation Modelling. The analysis revealed a positive connection between burnout and emotional job demands. In addition, leader support was observed to be more beneficial than colleague support. As a significant personal resource, emotion regulation strategies (e.g., reappraisal) could buffer the adverse impact of job demands and increase job resources, thereby decreasing burnout levels. The results highlight the significance of job characteristics to predict job burnout. Furthermore, our results suggest that emotion regulation is a personal resource that influences burnout; hence, it should be included in creating high-quality work environments for administrators. Limitations and further implications are also discussed.

Keywords: burnout; emotion regulation; job demands; job resources; university administrator

1.0 Introduction

In the contemporary, rapidly changing information era, educational institutions are challenged to adapt to the evolving needs of society and the relentless march of technology. As Smolentseva (2023) underlines, the management capacities of universities must be fine-tuned to meet these shifting expectations. However, at the forefront of this transition are university administrators who are specifically employed to execute administrative duties (Guidetti et al., 2022), shoulder the burden of this evolution. As Baltaru & Soysal (2018) suggest, administrators emerge not only as the backbone supporting efficient university operation but also as pivotal in enhancing research impact, societal engagement, and overall student support. However, complicated interpersonal relationships, tedious and repetitive work, restrictive management policies and unexpected work content are more conducive to administrators' job burnout (JB).

In accordance with the Job-Demands Resources (JD-R) model (Bakker & Demerouti, 2017), this study was conducted to examine how job demands together with the job resources influence JB among the administrators. Furthermore, in light of the fact that an individual's emotional competence can assist in dealing with job demands and promote communication with others, this research postulates that an administrator's ability to regulate emotions can be a personal resource. Therefore, this paper explores whether emotion regulation mediates the connection between job characteristics and JB.

2.0 Literature Review

2.1 The JD-R Model

Demerouti et al. (2001) first proposed the JD-R model to gain an understanding of the influences on JB. The model categorizes all of the job characteristics into job resources and job demands.

In the JD-R model, job demands are generally regarded as negative material, social, or the organizational aspects of one's job, whereas job resources are positive values (Schaufeli & Taris, 2014). In that context, Demerouti et al. (2001) noted that job demands were significantly associated with burnout. Similarly,

job resources can mitigate the influence of job demands on burnout (Lesener et al., 2019).

2.2 EJD, LS, COS and JB

Emotional Job demands (EJD) are often seen as stressful and harmful because they drain valuable resources while also making people feel emotionally uncontrollable (Grandey & Melloy, 2017). Prior study has indicated a positive relation between negative outcomes and EJD (Brotheridge & Grandey, 2002).

H1: EJD are positively associated with JB.

Prior research has found that JB negatively affects social support (Xanthopoulou et al., 2007). In this work, we delineated two categories of social support, colleague support (COS) and leader support (LS), and assumed that these two types of support have a negative association with JB:

H2: COS (H2b) and LS (H2a) have negative association with JB.

2.3 Emotion regulation as a personal resource

Gross proposed two broad emotion regulation strategies, expressive suppression (SU) and cognitive reappraisal (RE). Gross & John (2003) reported that individuals who employed the RE exhibited positive emotion regulation skills, well-being as well as better interpersonal functioning, and were less likely to cope with job burnout. In contrast, those who adopted SU displayed poorer well-being, poorer interpersonal functioning, and a greater likelihood of coping with JB. In accordance with the above findings of the study, these hypotheses were formulated:

H3: RE (H3a) and SU (H3b) have negative and positive association with the JB,

respectively. H4: EJD are negatively and positively linked to the RE (H4a) and SU (H4b), separately.

H5: LS is positively and negatively related to RE (H5a) and SU (H5b),

separately. H6: COS is positively and negatively linked to RE (H6a) and SU (H6b), separately.

Lastly, it is assumed that emotion regulation can act as a mediator between EJD, LS, COS and

JB.

3.0 Methodology

The overall number of administrators in 167 universities are 27809 in Jiangsu Province and they are the potential participants in this research. Based on Krejcie & Morgan (1970) and formula calculation result, the recommended sample size 378 add 40% as suggested by (Salkind, 2012) for non-responders, a total of 530 administrators are randomly selected in Jiangsu Province to provide reliable and valid results.

Table 1. Stratified random sampling

Type	University Number	Total administrators	Sample Size
Undergraduate University	78	20230	386
Vocational Universities	89	7579	144
Total	167	27809	530

3.0 Analysis

Analysis was conducted utilizing Mplus 8.0 and SPSS 21.0. Descriptive statistics and correlation were calculated with SPSS. Afterwards, structural equation modeling (SEM) was carried out via employing Mplus. Bootstrapping was applied to identify the indirect impacts of the mediation analysis (Hayes, 2009).

4.0 Results

4.1 Descriptive results

CFA displayed good data fit for the Emotional Job Demands Scale ($\chi^2=22.71$, $df=2$, $p<0.01$, RMSEA=0.10; CFI=0.993; TLI=0.979), Maslach Burnout Inventory ($\chi^2=80.98$, $df=5$, $p<0.01$, RMSEA=0.10; CFI=0.96, TLI=0.92), Colleague Support Scale ($\chi^2=101.65$, $df=13$, $p<0.01$, RMSEA=0.08; CFI=0.98; TLI=0.97), the Emotion Regulation Questionnaire ($\chi^2=454.31$, $df=34$, $p<0.01$, RMSEA=0.10, CFI=0.92, TLI=0.90). All these scales exhibited great structural validity and reliability. In terms of correlations, all variables were significantly correlated.

Table 1. Descriptive statistics, reliability and correlations matrix

Factors	EJD	LS	COS	SU	RE	JB
1. EJD	—					
2. LS	.10**	—				
3. COS	.22**	.63**	—			
4. SU	.27**	.18**	.19**	—		
5. RE	.50**	.31**	.35**	.61**	—	
6. JB	.21**	-.28**	-.19**	.14**	-.03**	—
Cronbach α	0.92	0.92	0.86	0.78	0.89	0.93
M	4.10	3.60	3.88	3.42	3.83	3.22
SD	0.68	0.93	0.71	0.71	0.59	0.97

4.2 SEM results

Results indicated an outstanding model fit ($\chi^2=1966.01$, $df=357$, $p=0.00$, $RMSEA= 0.067$, $CFI=0.92$, $TLI=0.91$). EJD predicted the SU ($\beta = .33$, $p < .01$), RE ($\beta = .51$, $p < .01$) and JB ($\beta = .29$, $p < .01$) positively, thus H4b and H1 were supported. LS was positively linked to SU and RE and negatively linked to burnout, and thus H5a and H2a were supported. COS had a positive association with RE ($\beta = .09$, $p < .05$), thus only H6a was supported. SU and RE were oppositely related to burnout, thus H3b and H3a are supported.

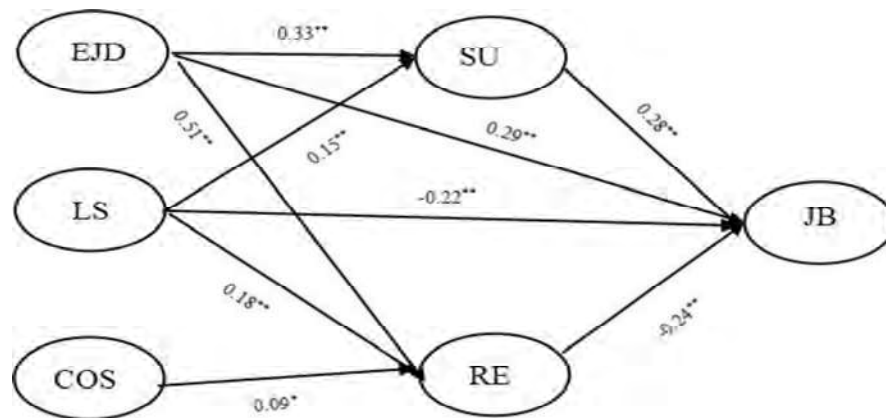


Figure 1. Associations between LS, EJD, JB, emotional regulation, and COS

4.3 Mediation results

Specifically, findings revealed that RE clearly mediated two dimensions: first, the impact of LS on JB ($\beta = -.05$, $p < .05$); second, the effect of EJD on burnout ($\beta = -.19$, $p < .01$), whereas SU concurrently strongly mediated the impact of EJD on JB ($\beta = .14$, $p < .01$).

Table 2. The role of emotion regulation strategies in mediating the association between JB and job characteristics.

Dependent variable	Independent variable	Mediation analysis			
		Mediation variable	Estimates (SE)	p	95% CI
JB	EJD	SU	.09(.02)	.00	[0.08, 0.22]
	EJD	RE	-.12(.03)	.00	[-0.29, -0.10]
	LS	RE	-.05(.02)	.03	[-0.10, -0.01]

5.0 Discussion

5.1 The impacts of COS, LS and EJD

Our findings that EJD were linked to JB are a strong indication of the detrimental impacts of

job demands. Furthermore, EJD positively predicted both RE and SU. Research has demonstrated that administrators employed both RE and SU strategies when faced with higher levels of EJD.

The research identified a weak role for COS in the prediction of burnout among administrators. This may be attributed to the fact that many administrators have fixed and specific duties, which restricts their opportunities to work with their coworkers. In addition, administrators report directly to their leaders, who assess their work, which may further reduce the significance of COS. Additionally, administrators are more inclined to interpret their work situation positively instead of repressing their negative feelings.

5.3 The importance of emotion regulation

Our findings suggested that RE was negatively linked to burnout, while SU was positively linked to burnout, respectively. These results are consistent with earlier research.

Additionally, SU served as a mediator in the impact of EJD on JB, while RE served as a significant mediator in the connection between LS, JB, and EJD. Our research provides further evidence that emotional regulation can act as a personal resource, while RE is a key resource to mitigate the effects of job demands on JB.

6.0 Implications for practice

First, the findings highlight the need for HEIs to focus more on emotional well-being and JB of administrators in view of the multi-tasking nature and demanding of their work. Second, policymakers should view the emotional and psychological needs of administrators as an essential aspect of their well-being, which will further impact their job performance. Additionally, administrators are more likely to utilize RE in a supportive leadership environment, which can provide deeper relief from their burnout.

7.0 Limitations and directions for future research

Firstly, all the data were collected through self-reporting, which could lead to bias in the generalized methodology. Second, the cross-sectional design limits our ability to derive causal inferences. Third, the generalizability of the results may be restricted by a sample from one province in mainland China.

8.0 Conclusion

The findings indicated that EJD were positively linked to the use of RE and SU. Besides, LS was more important than COS in minimizing burnout. Interestingly, COS was not significantly related to job burnout. Administrators' emotion regulation strategies were identified as mediators that affect the relations between LS, JB and EJD. These findings give valuable insights for better administrative development and a high-quality work environment from an emotional and interpersonal perspective.

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Unlocking the Future: Fostering Critical Thinking and Problem-Solving Skills Through Distributive Leadership for School Effectiveness

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Abstract

Modernization has brought about a knowledge economy where knowledge is accepted as the driving force for productivity and development. Hence, international organizations, governments and schools are taking proactive measures to ensure they have effective schools that fit the modern world. This study therefore aimed to examine fostering critical thinking and problem-solving skills through distributive leadership for effective schools. Teachers in northwest Nigeria were the population of interest for this study, and 381 teachers were sampled out of a total of 1,650 teachers. The sample was proportionally stratified and randomly selected among the federal secondary schools. Descriptive statistics and AMOS were used for analysis. Results disclose that distributive leadership significantly and positively have an effect on school effectiveness. The study concluded that distributive leadership can be a primary ground for flourishing critical thinking and problem-solving skills for teachers and the next generation of learners.

Keywords: *School effectiveness; distributive leadership; critical thinking; problem solving*

1.0 Introduction

Modernization has changed the global paradigm to a knowledge economy (Ozga, 2000). Hence, knowledge is considered the most lucrative driving force for high economic production and national prosperity (Nurkhin & Pramusinto, 2020). As such, schools, national governments and international organizations have prioritized education reform and struggle to have effective schools. Effective schools are thus conceptualized as modernized schools that produce knowledge that can be commercialized and ensure learners have the required global skills (Cheng, 2022). Effective schools supply a quality labour force needed in economic globalization, develop necessary skills in learners, and ensure socialization with the norms and beliefs of society.

To achieve effective schools that provide global education, some skills were keenly identified as necessary for learners to compete globally. Among the skills are critical thinking (CT) and problem solving (PS), which are certified as the purpose of education and central to the learning process. CT is defined as the willing self-principled judgment that leads to scanning, assessing, speculating, explaining concepts, based on evidence, logical criteria, methods, or context considerations upon which that judgment is based (Stupple et al., 2017) and involves reasoning (Fuad, 2017).

PS is a process of sharpening reasoning in a more careful, rational, critical, and creative way (Cui et al., 2018). PS means effort to remove the barriers confronted to achieve a specific goal. It involves designing and assembling various abilities, attitudes, beliefs, perceptions, information, and prior experience (Göktepe Yıldız, & Göktepe Körpeoğlu, 2023). Furthermore, researchers in developed countries (England, USA) tested policies and pointed out some that successfully ensure effective schools. DL is one of those successful policies that is trending and tagged as necessary for school effectiveness (Leithwood et al., 2020). DL is defined as emergent shared leadership in formal settings with non-formal leaders instead of solo leadership and interactions between leaders, followers and situations (Bush & Ng, 2019). International organizations such as UNESCO, and OECD are promulgating DL to ensure schools are effective, and modernized and provide learners with global skills relevant to this era. Thus, many developing countries (India, Malaysia and Nigeria) are adopting DL (Takala et al., 2018).

Considering the population of learners from developing countries, it is, therefore, relevant to unravel the fostering of CT and PS skills through DL for enhanced school effectiveness (SE) in the next generation of learners. A challenge in the field is to navigate how DL can be hitched up to empower CT and PS skills and in the long run, improve the overall SE and prepare the next generation of learners for success. Sequentially, the methodology, findings and arguments and conclusions will be detailed.

2.0 Methodology

The methodology for the study is quantitative. The population of interest for the study is northwest Nigeria. To permit generalization, 381 respondents were sampled out of the total population of 1,650 teachers using The Research Advisors (2006). The sample was proportionally stratified and randomly selected among the 18 federal schools in northwest Nigeria. SE instrument and DL instrument were adopted from Lezotte and Snyder (2011) and Hulpai et al. (2009), and a pilot study was conducted with 51 federal primary school teachers and the instruments were found to be reliable with 0.931 and 0.950 respectively.

Data was collected following ethical considerations and 345 responses were retrieved. The data normality was ensured and screened, and confirmatory factor analysis was conducted to sieve the items that have a factor loading of 0.5. The items that have less than 0.5 factor loading were discarded. Descriptive analysis was used to find the practical level of DL and SE while inferential statistics using AMOS was used to note the direct effect of DL on SE.

The second order model for SE validated the first order and tested the precision of the model. The model confirmed 6 indicators of SE. CMIN= 584.511, DF=271.0, P= 0.001, CMIN/DF=2.1, GFI=0.882, AGFI=0.847, NFI=0.882, IFI=0.933, TLI=0.919, CFI=0.932, SMRS=0.047, RMSEA=0.058 and PClose=

0.021. The construct reliability is 0.945, AVE= 0.741. The correlation of the latent variables ranges between 0.712 to 0.751.

Likewise, the second order model was tested to ensure the precision of measurement model for 2 indicators of DL. The results indicate a CMIN=234.102, DF=109.0, CMIN/DF= 2.166, P=0.001, GFI=0.929, AGFI=0.901, NFI= 0.932, IFI= 0.962, TLI= 0.952, CFI= 0.962, SRMR=0.036, RMSEA= 0.058, PClose=

0.090. The construct validity for the 2 indicators was 0.939 and AVE= 0.884. The correlation latent variables were 0.708 and 0.728. Thus, both models are fit, valid and reliable.

3.0 Findings and Arguments

Findings of the study were detailed in this section. Likewise, an argument on the topic was highlighted based on the result of the study. The level of SE and DL is moderate with M= 3.56

and $SD = 1.01$, $M = 3.37$ and $SD = 1.09$ respectively. The direct effect of DL on SE is $B = 0.172$, $\beta = 0.658$, $S.E. = 0.022$, $C.R. = 7.872$ and $P = 0.001$. The $R^2 = 0.433$ indicates that DL accounted for 43.3% of the variance in SE. Mbonu and Azuji (2021) also observed a moderate level of DL in Anambra State, Nigeria. DL enhances the autonomy of teachers and students by involving them in decision-making, interactions and sharing responsibilities (Harris and Jones, 2018). This fosters students' participation directly and indirectly through their teachers' active CT and PS in daily activities, thus, contributing to students' CT and PS skills (Hitchcock, 2018).

The level of DL, SE and the effect of DL on SE are all at a moderate level. This could be due to uniformity of curriculum, accountability and standardized examinations within the federal schools. Fernández-Santín and Feliu-Torruella (2020) and Erikson and Erikson (2019) stressed that schools just force learners not to question authority, give recognised answers, and value conformity, instead of training them to think critically and use their creativity to find solutions to problems. If DL is highly functional, teachers have a take on curriculum development and assessment and can provide better chances to improve the CT and PS of learners through various modules, teaching methods and delivery modes.

Crawford (2012) explained that DL emphasizes the responsiveness of members. If CT is the capacity of thinkers to be conscious and in control of their thinking process and to develop a practicable yardstick for monitoring and evaluating their thinking, establishing clear and logical connections, and being self-directed and disciplined (Seibert, 2021) then DL will enhance CT and PS of both teachers and learners.

Day et al. (2020) stressed that DL is uncertain without the success of both transformational and instructional leadership. A lack of solid instructional leadership will hinder the feasibility of DL, teachers' performances, students' achievement and thus, leading to ineffective schools. Hallinger (2018) emphasized that context (social, cultural) affects the practice of DL. Accordingly, CT and PS skills are essentially compatible and more pronounced in some cultures than others (Fan and See, 2022). Hence, nurturing DL in schools can be a foundation and foster CT and PS resulting in SE.

4.0 Conclusion Remark

Effective schools provide learners with the skills and ability to think critically and solve problems systematically, rationally, and creatively, to produce knowledge that can be commercialized and sustainable. DL fosters SE by improving CT and PS and enhancing the current and next generation of learners.

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Assessing Outcomes of Residential Colleges: Exploring College Environment and Students' Academic Performance in China

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Abstract

This comparative research aims to examine whether the transformation of residential college in China supports the sustainable equity effect in delivering quality higher education. A quasi-experimental research design is adopted, using descriptive and inferential analysis to examine data from 792 RC and non-RC students across three public universities. The results suggest that there is no significant difference in academic performance between residential college students and non-residential college counterparts. However, evidence is found indicating that the residential college positively moderates the influence of college living experiences on students' academic performance. The results objectively evaluated the role of residential colleges. This study can guide informed decision-making to harness the benefits of RCs and mitigate the risk of further escalating educational crises.

Keywords: *residential college, socioeconomic status, academic performance, education equality, quality*

1.0 Introduction

As higher education in China has transitioned into a stage of universality, an increasing number of individuals and families now have direct access to higher education opportunities (Hu, 2021). However, this expansion in university enrolment has raised several concerns (Zhou, 2020). These concerns include issues like limited faculty-student interaction, a potential neglect of student personality development, and a perceived decline in the overall quality of college education (Feng, 2018). In response to the new challenges and circumstances facing higher education, many of the mainland Chinese universities have embarked on reforms within their residential college (RC) systems. Starting in 2017, RCs gained official recognition and became a significant component of China's educational system reform efforts (Gong et al., 2021).

Through the practical implementation and extensive research undertaken by numerous colleges and universities, this model has emerged as a robust platform, with a focus on enhancing students' holistic capabilities and fostering the independent development of their personalities (Zhou, 2020). However, based on practical experience and reported observations, there are certain real-world challenges associated with the RC model in China (Liu, 2018). As pointed out by Wu (2021), this student management model bears resemblance to the spatial structure of Western RCs and ancient Chinese academies (Shuyuan). Yet, it may not fulfil a fundamental role in talent development comparable to European and American universities. Furthermore, there are lingering uncertainties surrounding RCs in China, such as how to effectively evaluate the model's performance, address its inherent limitations, and optimize its role in nurturing talent (Xiang, 2021). While there is no shortage of literature on Chinese RCs, the majority of it focuses on the conceptual framework, implementation, and practical

effectiveness of the model. Much of this research remains at the level of interpreting concepts and summarizing experiences and has not yet reached the theoretical depth required for an effective educational system.

This study mainly aims to examine the effectiveness of RCs in the context of China. The following research questions were constructed:

RQ1. Is there any difference in academic performance between RC and non-RC students?

RQ2. Does RC moderate the influence of college living experiences on academic performance?

2.0 Literature Review

RC, in essence, seeks to blur the boundaries between a student's formal academic endeavors and their extracurricular experiences on campus. It achieves this by cultivating a community that encourages increased engagement with faculty and peers, provides more opportunities for coordinated learning activities, and offers a supportive environment for both academic and social growth (Hurtado et al., 2020). In comparison to traditional dormitories, RCs transform living spaces into vibrant learning communities, offering access to educational resources, activity facilities, and the implementation of general education initiatives for students (Zhou, 2017). Additionally, RCs carve out secure spaces for students who share common academic or career aspirations, fostering opportunities for interaction both within and beyond campus boundaries. This learning experience hinges on engaging with peers and participating in reflective processes as part of a communal environment where students can both give and receive feedback from their peers (Baker & Allen, 2021). Furthermore, RCs are typically assessed through four key dimensions: the residential environment, interactions with faculty and peers, and the overall academic atmosphere (Inkelas et al., 2008).

In the realm of higher education, college outcomes, often referred to as academic performance, are evaluated using a model known as IEO (Inputs, Environment, and Output), originally proposed by Astin (1993). According to this model, learning outcomes are shaped by various inputs and the college environment, with the resulting output typically manifesting as academic performance (Kumar et al., 2021). It is worth noting that this model serves as the theoretical framework for our study.

3.0 Research Design

For this study, a quantitative approach, specifically a quasi-experimental research design is adopted. This research design is considered suitable because of assessing the influence of RCs by making comparisons between RC and non-RC students (Inkelas et al., 2006).

3.1 Sample and sampling techniques

This study used a multi-stage sampling strategy. Universities that had introduced RCs with student participation during or before 2018 were selected. Due to time and cost restrictions, a purposive sampling technique is utilised to select one university from three districts. The sample school was then chosen using random sampling from three distinct districts. These sample universities have a total of 1299 RC students. The Research Advisor (2006) sample size table indicated that 489 RC students were selected. Then, stratified proportionate sampling was used in three sample institutes. To undertake the comparative analysis, an equal number of non-RC students from the same universities were chosen.

Data collection for this study took place between March and June 2023 through an online survey. Prior to conducting the survey, approvals were secured from the selected institutions,

and respondents were given assurances regarding the confidentiality of their responses. After filtering out questionnaires with a substantial amount of missing data, we were left with 792 valid questionnaires, yielding a commendable response rate of 91.7%. Among the panel, 50.13% were RC students, 53.8% were male respondents, and 52.3% hailed from rural areas, with the samples being nearly identical in terms of these characteristics.

3.2 Instrument, reliability, and validity

The survey instrument utilized in this study is adapted from previously validated questionnaires employed in prior research (Inkelas et al., 2006; Chen, 2022). To assess its reliability and validity, a pilot study was conducted. The results of the reliability test indicated a Cronbach's Alpha value of 0.895, signifying a satisfactory level of internal consistency. Furthermore, we employed Exploratory Factor Analysis (EFA) to validate the instrument's construct. The appropriateness of both the sample and the data was assessed using the Kaiser-Meyer-Olkin (KMO) measure, which yielded a value of 0.896, and Bartlett's test of sphericity ($p < 0.001$). These results confirmed the suitability of the sample for factor analysis, as recommended by Kaiser (1974). In addition, we conducted principal component analysis and varimax rotation. The outcomes of these analyses affirmed the validity and reliability of the data.

3.3 Data analysis

Data analysis will be carried out utilizing descriptive and inferential statistics. Specifically, the comparative analysis initially to examine whether RC students outperform than non-RC peers. Then, independent sample t-test and multiple regression analysis are conducted to further examine the research questions. To explore the moderating role of RC on college living experiences (CLE), the interaction term RC*CLE is introduced into the multiple regression model. Additionally, the control variables are identified in this study, including socioeconomic status, gender, ethnicity, schooling year, and major.

4.0 Findings

The findings are presented using comparative analysis, independent sample t-test and multiple regression analysis.

To examine the first research question, the central tendencies of CGPA were contrasted by RC programme participation status. The findings show that there are no obvious variations in the mean CGPA values between the two groups of participants: RC and non-RC. To further test this finding, an independent sample t-test was employed. The result shows that there was no significant difference in academic performance between the two groups, $t(790) = .037, p = .065$. Then, multiple regression analysis was conducted to explore the second research. The result indicates that there is a significant relationship between RC and CLE ($\beta = 0.188, p < 0.01$). It means that RC positively moderates the impact of college living experiences on academic performance.

5.0 Discussions

This study seeks to enrich academic research on RCs in the background of China. Some previous research indicated that RC contributes students' learning outcomes (Muldoon & Macdonald, 2009; Friswold-Atwood, 2018). In contrast with the previous research results, the findings confirm that the aims, scale, setting, kind, and other characteristics of RC programmes can vary greatly, which may result in diverse effects on student learning outcomes (Inkelas et al., 2008; Buell et al., 2017). Moreover, the findings on the positive moderating role of RC provide evidence that RC programs contribute to students' school achievements. Furthermore, this study

has practical implications for enhancing undergraduate education, particularly in terms of inclusivity and equality.

6.0 Concluding Remarks

The results of this research demonstrate that RCs have the potential to improve the impact of college living experiences on students' learning outcomes and their expectations of the education system. These findings emphasize the value of RC participation for on-campus students and provide valuable insights into the intrinsic significance of supporting qualified education through the RC system.

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Exploring the Influence of AI Tools on Critical Thinking and Problem-Solving through an Optimized Workflow in Academic Research Environments

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Abstract

The accelerated advancement of artificial intelligence (AI) tools, particularly conversational generators such as ChatGPT, has markedly enhanced productivity within the academic research milieu. Nonetheless, this dependency could impede the cultivation of critical thinking and problem-solving competencies among academic researchers, especially students. This investigation delineates the repercussions of AI tools on students' critical thinking and problem-solving aptitudes in academic research, employing a mixed-methods analysis encompassing surveys and interviews. The results of the study showed that while the AI tool improved research efficiency in most of the research steps, the impact in the process of literature finding and critical review was negative. Furthermore, this study describes an innovative workflow to optimize the use of AI tools in different research phases to promote critical thinking and problem solving. This study not only promotes practical strategies for researchers, but also facilitates the evolutionary iteration of AI tools, laying the foundation for future AI research.

Keywords: critical thinking, problem solving, artificial intelligence, academic research

1.0 Introduction

The development of modern civilization has been greatly accelerated with the support of computer technology (Issayeva et al., 2016), leading to profound impacts on both the economic development of society and the lives of its citizens (Palvia et al., 2018). Particularly, the advancement of artificial intelligence (AI) technology has significantly enhanced social productivity and efficiency (Liu et al., 2023; Goralski & Tan, 2020). AI finds extensive applications within educational settings, enabling educational institutions to implement intelligent personalized education more effectively (Dogan et al., 2023). Additionally, AI-powered virtual chatbots can provide students with question-answering and tutoring services, assisting them in comprehending and resolving academic issues.

Academic research stands as one of the most crucial activities in higher education. In recent years, the application of artificial intelligence tools within academic research settings has become a focal point of scholars' investigations (Crowe et al., 2017; Razack et al., 2021). While artificial intelligence offers significant opportunities for supporting teaching and academic research, its application in academic contexts also presents numerous challenges and drawbacks. On the one hand, the current state of development of AI tools still possesses several limitations, such as the need for improvement in terms of accuracy (Ram & Verma, 2023). On the other hand, an excessive reliance on artificial intelligence tools can restrict students' capacity for critical thinking and skill development (Tuhtaboevich, 2023), potentially leading to academic

misconduct and other adverse consequences.

In reality, academic research constitutes a complex and systematic endeavor (Russell, 2023). Critical thinking and problem-solving abilities stand as pivotal factors in conducting high-quality academic research (Mataniari et al., 2020). They assist researchers in achieving success in theoretical construction, experimental design, and data interpretation (Pan & Zhang, 2021), while ensuring the credibility and applicability of the research (Pally, 2001). Consequently, the effective integration of artificial intelligence tools into academic research, with the aim of enhancing researchers' critical thinking and problem-solving skills, holds the promise of driving industrial innovation and societal development through academic research (Dwivedi et al., 2021). This has long been a goal that researchers are striving to achieve.

Despite some attempts to explore the relationship between artificial intelligence and critical thinking and problem-solving abilities (Abdelaal et al., 2019; Cotton et al., 2023), existing researches still have limitations. Firstly, most current research primarily examines the application of AI tools from the perspective of computer technology development (Chen et al., 2020), overlooking the subjective agency and self-critical and self-optimizing aspects of human beings. Secondly, existing research neglects the holistic and systemic nature of academic research (Kühnen & Hahn, 2018). Finally, the methods employed in current research are often overly singular, unable to precisely uncover the underlying reasons and the genuine experiences of users.

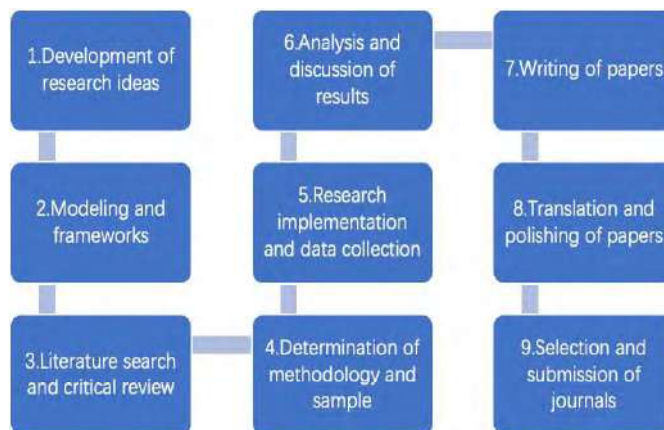
These limitations not only hinder our deeper understanding of AI tools but also impede the future enhancement and development of such tools. Therefore, the aim of this research is to determine the impact of current levels of AI tools on critical thinking and problem-solving abilities in various processes within academic research settings. This will aid scholars in gaining a more comprehensive understanding of the strengths and weaknesses of AI tools and enable their efficient application across different processes within academic research settings. Based on this, the research questions for this study are as follows:

- RQ1: What is the frequency and proficiency level of the use of AI tools by university students in academic research?
- RQ2: What is the current level of critical thinking and problem-solving abilities among university students in academic research?
- RQ3: What are the impacts and challenges of AI tools at different stages of academic research on critical thinking and problem-solving abilities?
- RQ4: How do researchers currently effectively and accurately utilize AI tools to enhance critical thinking and problem-solving abilities in academic research settings?

2.0 Methodology

The research methodology for this study is a mixed-methods approach, combining both quantitative and qualitative research. Initially, a questionnaire survey is conducted to gauge the frequency and proficiency level of AI tool usage among researchers, as well as their current levels of critical thinking and problem-solving abilities in the context of academic research. This phase aims to establish how AI tools impact critical thinking and problem-solving abilities at different stages of academic research. Subsequently semi-structured interviews are conducted to gain a deeper understanding of how AI tools influence critical thinking and problem-solving abilities. Finally, based on the results of the mixed-methods research, an attempt is made to summarize the role and definition of AI tools and construct a future AI academic workflow.

The study population for this research consists of 154 university students at a university in China. Data collection is carried out through an online survey platform, using a simple random sampling method. Subsequently, based on the inclinations identified in the survey, 8 university students voluntarily participated in semi-structured interviews. The research tools used in this



This tool is divided into three sections, the first section gathers basic information about the respondents, including gender, nationality, educational background, field of study, native language, academic publication experience, frequency of AI tool usage, and proficiency levels. The second section comprises questions related to 9 steps in academic research as the Figure 1 shown, each assessed using a 5-point Likert scale. For example, for the step of literature search and critical review:

- (1) I can complete research-related literature searches.
- (2) I can critically review literature based on what I have found.
- (3) AI tools help me effectively with research-related literature searches.
- (4) AI tools help me effectively with the critical review based on what I have found.

The third section assesses whether respondents are willing to participate in further semi-structured interviews, providing a qualitative dimension to the study. Data collected from the survey were subjected to descriptive statistics using SPSS 26.0 software for quantitative analysis. Content analysis was employed for the qualitative analysis, allowing for a thorough examination of the interview data. This mixed-methods approach enables a comprehensive investigation into the research questions and provides a balanced perspective on the subject.

What is the frequency and proficiency level of the use of AI tools by university students in academic research?

The results indicate that approximately half (47.1%) of the respondents reported using artificial intelligence tools in their academic research, with 18.71% stating that they use them frequently. Only 11.61% of the respondents reported minimal or no experience with using AI tools in academic research. Furthermore, the results reveal that 42.58% of the respondents, while having some skills, frequently use AI tools in academic research, while 25.16% of the respondents reported both proficiency and frequent use. Only 15.48% of the respondents indicated that they were neither proficient nor frequent users. These findings further underscore the high frequency

of AI tool usage in academic research, but only a quarter of the users are proficient.

What is the current level of critical thinking and problem-solving abilities among university students in academic research?

The results indicate that university students scored below the overall average (3.895) in problem-solving abilities during the processes of constructing research models and frameworks, translating and proofreading research papers, and selecting and submitting to academic journals. Their scores were above the overall average for the remaining processes. Furthermore, the results also show that university students scored below the overall average (3.896) in critical thinking during the processes of determining research methods and samples, analyzing and discussing research results, and selecting and submitting to academic journals, while their scores were above the overall average in the remaining processes.

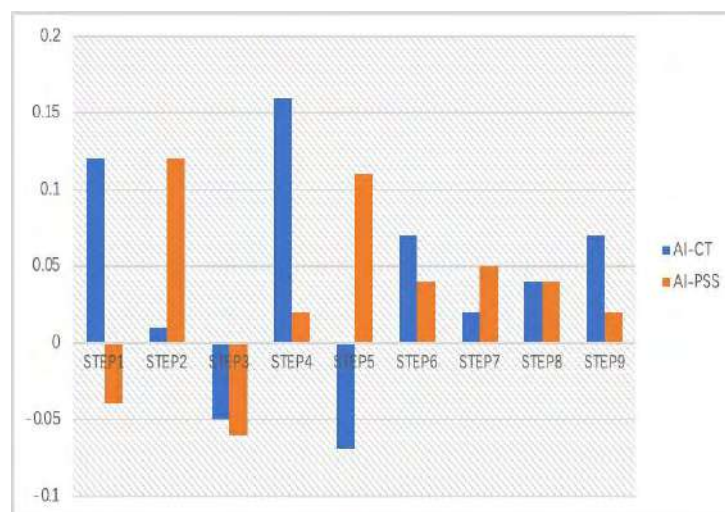


Figure 2. Impact of Artificial Intelligence Tools on Critical Thinking and Problem-Solving Skills

What are the impacts and challenges of AI tools at different stages of academic research on critical thinking and problem-solving abilities?

The data results shown in Figure 2 revealed that artificial intelligence tools do not effectively assist users in generating research ideas, and the smallest difference in scores was observed in the processes of literature search and critical review (-0.06). The interview results suggest that AI tools are beneficial for expanding thinking and breaking through established knowledge systems, especially in interdisciplinary research projects and complex research methods. However, AI tools do not seem intelligent in literature search and retrieval, and overreliance on them can hinder the development of critical thinking and problem-solving abilities. Instead, they should be viewed as academic mentors rather than a replacement for human cognitive capabilities.

How do researchers currently effectively and accurately utilize AI tools to enhance critical thinking and problem-solving abilities in academic research settings?

Based on the mixed research findings, the researchers have attempted to develop a workflow tailored for academic researchers. This workflow involves that **AI tools for framework construction—manual literature search—human screening and matching—manual critical review—AI-powered proofreading.**

In such a workflow, human critical thinking is maximally utilized to address the limitations of AI tools in literature search, which can result from technological barriers and other factors. This approach combines the advantages of AI in streamlining processes with the strengths of human critical thinking and problem-solving to enhance the quality and efficiency of academic research. Furthermore, this workflow specifically defines the role of AI tools in academic research settings as an all-encompassing academic and skill-based coach available round the clock.

4.0 Conclusion

This mixed-methods research contributes to enriching the theoretical understanding of how artificial intelligence tools impact critical thinking and problem-solving abilities in academic research. Notably, this study innovatively dissects and analyzes the influence of AI tools on each step of the academic research process, providing a detailed examination of their effects at each stage. Furthermore, the proposed AI tool workflow and role definition introduced in this study are poised to aid researchers in effectively harnessing the positive aspects of AI tools in practical academic research. This research offers valuable insights into the intricate interplay between human intellect and AI in the academic research domain, paving the way for more informed and productive use of AI tools in academic research.

However, this research also has limitations. First, the study did not measure and assess different dimensions of critical thinking and problem-solving skills in depth, limiting in-depth quantitative analysis. Second, the study did not compare samples with different educational backgrounds and academic publication experiences, thus failing to reveal the impact of AI tools on different groups. In addition, the use of AI tools is a broader concept that is difficult to accurately quantify, and more relevant variables can be introduced in future studies. Finally, the study population was limited to undergraduate students, most of whom had no publication experience and failed to represent the main body of academic research. Future studies should expand the sample range to obtain more comprehensive results.

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Navigating the Storm: Reframing the VUCA Challenges

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Abstract

The beginning of the 21st century has led leadership and management theories to pay increased emphasis to the importance of reviewing and revising leadership approaches, especially in volatile, uncertain, complex, and ambiguous (VUCA) situations. The term VUCA refers to various challenging situations and it is of major relevance for educational organizations and especially leaders to pay attention to how these obstacles can be transformed into positive frameworks. In recent years, leaders in education are facing difficulties since their responsibilities are expanding, and depending on their past experiences is no longer enough. In today's educational scene, leaders are no longer just administrators or managers, but navigators who are expected to lead and guide their organizations through the chaotic VUCA world. This concept paper briefly explores what each alphabet of VUCA stands for and how leaders may reframe these challenges so that they are better equipped to face them, continually strive for positive outcomes for their institution and stakeholders, and ultimately be able to navigate successfully.

Keywords: *VUCA, educational leaders, re-framing, challenges*

1.0 Introduction

In an ever-changing, complex, and uncertain world, educational leaders face an extraordinary challenge. The concept of VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) has become a familiar acronym in the leadership lexicon. A leader cannot be a leader if they do not know how to navigate such an environment. In today's educational landscape, leaders are no longer just administrators or managers, but navigators tasked with leading and guiding their organizations through the turbulent VUCA world. In a recent OECD statement entitled *Building the Future of Education*, the acronym VUCA was further highlighted to characterize the unstable and uncertain future of the education system, which is now influenced by a range of volatile conditions around the globe (OECD, 2021). Given the rapid and continuous change in the world of education, there is an urgent need for new ideas, approaches, and tools to ensure the continuity of education (Browne, 2020; Drysdale & Gurr, 2017; Gurr, 2020; Kruse et al., 2020; Netolicky, 2020). It is therefore essential to rethink education and schools, with the reform of educational leadership as an appropriate starting point (Leithwood et al., 2019; Mazurkiewicz, 2021).

VUCA situations are characterized by their unpredictability, whereby volatile events can disrupt established norms, uncertainty overshadows the future, complexity makes problems multi-layered and ambiguity clouds the understanding of cause and effect. It remains a particular concept that is especially relevant in the context of leadership, as leaders need to be able to deal with the turbulent environment (AbdLatif & Shaukhi Ahmad, 2020; Alkhaldi et al., 2017; Bennett & Lemoine, 2014; Chawla & Lenka, 2018; Johansen & Euchner, 2013). Therefore, today's leaders need to possess certain behaviors, characteristics, and values that are particularly important in

such conditions. They should be able to articulate and communicate leadership qualities in uncertain times, maintain stability while coping with disruption, and focus on people in the face of persistent uncertainty (Wilson, 2023). The literature highlights that today's disruptive events are transforming the normal educational process, and it is now evident that the situation has created unprecedented challenges for educational leaders (Browne, 2020; Harris & Jones, 2022; OECD, 2021). Moreover, the responsibilities of educational leaders have become more difficult as they are almost simultaneously tasked with creating safe environments that are conducive to learning and teaching, while at the same time dealing with the turbulence and VUCA situations that could affect their ability to lead (Browne, 2020).

Much of the literature on the VUCA world emphasizes that leaders must first understand individual challenges before they are able to recognize and respond properly to the circumstances. Scholars in the field have stressed that understanding each acronym is crucial because each challenge is distinctly different and these unique differences are valuable to leaders (Bawany, 2018; Bennett & Lemoine, 2014; Johansen & Euchner, 2013; Saleh & Watson, 2017). Therefore, this paper aims to explain each of the terms in order to show a clear distinction between VUCA terms that can help educational leaders identify how each challenge is different from the other. Secondly, the paper will identify some ways in which these challenges can be transformed into a positive framework that can help leaders be better prepared to lead in such an unpredictable world in the current and future circumstances.

Theoretical overview and literature synthesis

1.1 Definitions of the term VUCA

The term VUCA is often used to describe an environment characterized by volatility, uncertainty, complexity, and ambiguity. The term was originally coined by economists Warren Bennis and Burt Nanus in their 1985 book "Leaders. The Strategies for Taking Charge". It highlighted the challenges that external factors pose to management and leadership and its implications for the world of management (Bennis & Nanus, 1985). Later, the military adopted this concept to characterize the modern warfare they faced at the end of the Cold War (Barber, 1992; Codreanu, 2016). Today, the term has gained acceptance in various fields, including health and education leadership. The acronym includes four key dimensions that can significantly confuse leaders and make it difficult for them to make accurate predictions.

Volatility	This word refers to a situation that is unstable and unpredictable. In the past, certainty, which is the opposite of volatility, was the salient feature of a stable world (Codreanu, 2016). A volatile environment occurs when an unexpected event upsets an already-established routine (Horney et al., 2010). In addition to that, the state of volatility can be a phenomenal increase in four aspects, namely the type, speed, volume, magnitude, and dynamics of change (Bawany, 2018; Horney et al., 2010; Saleh & Watson, 2017).
Uncertainty	This word is used to describe an environment characterized by constant change leading to an unpredictable future. For some, uncertainty means the lack of predictability of events that might occur, considered a lack of knowledge (Bennett & Lemoine, 2014; Horney et al., 2010; Prakash, 2017). Bennett and Lemoine (2014) further emphasize that uncertain situations are the polar opposite of volatile situations, as they are marked by a lack of understanding or information rather than dramatic change. On the other hand, some argue that uncertainty is a consequence of volatility, as it cannot be relied upon despite information being available, as change is constant and unpredictable (Bawany, 2018; Kaivo-oja & Lauraeus, 2018).
Complex	Complexity refers to the perplexing problems and chaos that surround any organization (Bennett & Lemoine, 2014; Horney et al., 2010). It is characterized by many interrelated parts and variables (Bawany, 2018; Bennett & Lemoine, 2014). This is typically the case when there is a wealth of data and knowledge, but leaders are overwhelmed by the sheer volume due to the complexity of the problem (Bennett & Lemoine, 2014). Furthermore, when a problem is complex, there is no clear link between the cause and effect of a problem, which affects the way organizations work (Kaivo-oja & Lauraeus, 2018).
Ambiguity	This word refers to a situation in which there is a lack of clarity despite available information. According to Bennett and Lemoine (2014), in ambiguity, there can be multiple plausible interpretations and there is no established precedent to predict the outcome. Furthermore, ambiguity often arises in the context of novelty or newness, typically associated with breakthrough products, emerging markets, innovative ideas, or untapped opportunities (Bennett & Lemoine, 2014).

2.1 Re-framing the VUCA challenges

The VUCA world provides not only problems but also significant opportunities for leaders and organizations. The literature on VUCA and leadership has shown that leaders need to see VUCA challenges as an opportunity to revise their leadership approaches, as traditional leadership methods are ineffective and often no longer practical in turbulent situations (Bawany, 2018; Codreanu, 2016; Horney et al., 2010; Johansen, 2007; Kaivo-oja & Lauraeus, 2018; Rimita et al., 2020). In such an atmosphere, leaders need to go forward by embracing the confusion and turning the unknown into possibilities that they may utilize (Johansen & Euchner, 2013). This section is about turning VUCA challenges into positive frameworks (Bennett & Lemoine, 2014; Deaton, 2018; Johansen & Euchner, 2013) and redesigning leadership in uncertain circumstances (Kukreja Jyoti, 2019).

- i. The VUCA Prime was developed by Bob Johansen (Johansen & Euchner, 2013) and consists of behaviors and capabilities that can be used as a blueprint model to help leaders and organizations create leadership plans to cope with the chaotic environment (Nandram, 2017). In this model, VUCA challenges can be transformed into a more positive framework to better navigate the chaotic world. In a positive VUCA world, leaders counter volatility with vision, uncertainty with understanding, complexity with clarity, and ambiguity with agility (Johansen & Euchner, 2013). These contracts are referred to as 'dilemma flipping', where leaders turn chaotic, confused situations into opportunities (Johansen & Euchner, 2013). The VUCA Prime is one of the most frequently cited terms and forms the fundamental understanding of most VUCA studies and literature in various contexts (Bawany, 2018; Chawla & Lenka, 2018; Codreanu, 2016; Ramakrishnan, 2021).

VUCA challenges	VUCA Prime
Volatility	Vision
Uncertainty	Understanding
Complexity	Clarity
Ambiguity	Agility

- ii. However, there are some authors who have the same overlapping concepts, and some have different opinions in providing solutions for turbulent leadership in the VUCA world. In an article by Bennett and Lemoine (2014), the authors offer a different kind of answer to the question of how to effectively address VUCA threats. In their article, they suggest that agility is the key to managing volatility, that information is crucial to combat uncertainty, that restructuring operations helps manage complexity and that experimentation helps reduce ambiguity (Bennett & Lemoine, 2014).

VUCA challenges	How to effectively address it
Volatility	Agility
Uncertainty	Information
Complexity	Restructuring
Ambiguity	Experimentation

- iii. In a similar vein, but in a more recent version, Deaton (2018) has the acronym VUCA transformed into: values; us; curiosity; and aspirations. While VUCA Prime aimed to find a solution to each VUCA challenge, Deaton (2018) assumed that the VUCA elements should be combined when leaders face VUCA challenges and that they are tools to help leaders succeed in a challenging environment. The first element, value, is a crucial element that

provides leaders with a solid foundation when making decisions in a constantly turbulent environment. Under the concept of ‘us,’ leaders need to realize that in a VUCA environment, it is the team members who are the focus, not just the leaders. This is because ideas or solutions to challenges can come from any part of the organization and in these circumstances, collaboration is key to success. Deaton (2018) noted that the next tool, curiosity, helps leaders deal with uncertainty and the complexity of the environment. The practice of being curious opens the space for questions, discovery, and exploration to expand knowledge and engage with new situations. The final tool, ambition, helps leaders refocus on results and provides a clear sense of purpose to ensure a forward-looking organizational culture. This tool is designed to ensure that leaders can encourage team members to change their mindset to move forward and not be afraid of the turbulent environment (Deaton, 2018).

VUCA challenges	VUCA tools
Volatility	Values Us Curiosity Aspirations
Uncertainty	
Complexity	
Ambiguity	

Kukreja Jyoti (2019) suggested that leadership approaches such as vision are no longer sufficient in the VUCA world. She noted that there is a shift from the usual problem-solving approach to progress through active engagement with uncertainty, which requires a higher level of leadership agility. For her, LEAP (liberal, exuberant, agile, and partnership) leaders need to penetrate the fog of uncertainty and demonstrate cognitive readiness traits and skills to lead successfully in the VUCA world (Kukreja Jyoti, 2019). As liberal leaders, they are open-minded and willing to adapt to new behaviors while being able to adjust existing values when needed. While exuberant leaders are described as passionate and optimistic about employer and stakeholder engagement, agile leaders can transform their leadership and develop the learning organization with cognitive readiness and creative thinking skills. The last acronym focuses on leadership and building trusting relationships with stakeholders, whether internal or external.

VUCA challenges	VUCA competencies and traits
Volatility	Liberal Exuberant Agile Partnership
Uncertainty	
Complexity	
Ambiguity	

3.0 Implication

In an ever-evolving world characterized by volatility, uncertainty, complexity, and ambiguity (VUCA), the need to adapt and thrive has never been more pressing. This article explores the issue and highlights the importance of shifting perspectives and strategies in the face of such challenges. It is hoped that this article will serve as a guide for leaders, both individuals, and organizations, to help them not only weather the storm but also take advantage of the opportunities that VUCA situations present. Encouraging leaders, especially in education, to adopt new perspectives and take innovative approaches, offers a glimmer of hope in a VUCA world and provides actionable strategies to succeed where others may falter. The essence of this article lies in the profound realization that VUCA are not insurmountable obstacles, but a canvas on which opportunities can be painted. By reframing the challenges that VUCA brings, leaders can find a new sense of purpose and hope as adversity becomes a springboard for growth. In a world where constant

change and disruption have become the norm, this article challenges readers to explore the uncharted territories of VUCA, seize opportunities, and successfully navigate the leadership journey. Suggestions for future work include conducting research or case studies of best practices of successful organizations that have managed to navigate VUCA conditions by putting their strategies and decision-making processes under the microscope.

4.0 Conclusion

In conclusion, understanding the VUCA concept is more important than ever in this rapidly changing world. It has become imperative for everyone, including leaders, to adapt our thinking, strategies, and approaches to meet these challenges head-on. By re-framing the VUCA challenges as opportunities for growth, leaders can position themselves for success. The ability of leaders to shift perspective, embrace change, and cultivate resilience is the hallmark of those who excel in VUCA conditions. In a world where uncertainty is the new normal, the lessons learned from navigating VUCA can empower leaders to face the unknown with confidence, creativity, and purpose. It is hoped that this article has shed some light on the need to continue our pursuit of knowledge and be able to successfully navigate the VUCA world.

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Empowering Tomorrow's Counsellors through Self-care Mastery

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Abstract

In the profession of counselling, counsellors carry a notable vulnerability to experiencing burnout and compassion fatigue. A significant number of counsellors encounter feelings of inadequacy and struggle with issues related to burnout as they begin their practical work in counselling services. This study explores the experiences of counsellors in two key areas: the sufficiency of their self-care training during graduate studies for real-world practice and the importance of integrating self-care training into counselling programs. Employing qualitative research methodologies, the authors conducted semi-structured interviews with a cohort of 12 registered Malaysian counsellors. The data were thereafter subjected to analyze using the NVivo software. The study found that participants universally deemed their self-care guidance during training as inadequate. They expressed a strong desire for comprehensive self-care training in the counselling curriculum. In conclusion, this research highlights the critical need for self-care training among counsellor trainees. Equipping them with self-care knowledge and skills enhances their preparedness for the demanding counselling profession, improves retention rates, reduces burnout risk, and elevates the quality of counselling services. The study strongly advocates for self-care training to be a mandatory component of counselling education and suggests potential benefits for educational institutions and relevant authorities.

Keywords: *self-care, self-care training, counsellors, burnout, inadequacy training*

1.0 Introduction

1.1 Counsellors' profession risk – burn-out and compassion fatigue

Counselling profession is a profession where, in the ongoing manner, counsellors strive to assist clients navigate their deepest traumas and struggles. Counsellors need to weight others' emotional burdens rests squarely on their shoulders. In the world of counsellors, this is a profession that offers immense emotional rewards because able to assist others but is not without its hidden dangers. They play a crucial role in supporting clients through life's challenges, offering guidance during times of crisis, and helping individual find their way to emotional well-being. But, counsellors themselves facing various obstacles, such as an overwhelming workload, administrative duties, ambiguity in their roles, familial obligations, inadequate time, and unrealistic expectations (Simsir, 2022). They are the unsung heroes of mental health, yet their own mental health is not without its unique set of risks.

In the unseen realm of this noble profession, counsellors often contend with matters that

have the potential to adversely affect their mental and emotional well-being. Among these challenges, burnout and compassion fatigue are increasingly recognized as pressing concerns within the counselling community. Therefore, it is imperative to emphasise the significance of self-care for counsellors (Baker & Gabriel, 2021; Posluns & Gall, 2019). The existence of burnout and compassion fatigue among counsellors not only jeopardizes their own mental health but also has broad consequences for the quality of care they can provide to their clients. In this study, we investigate a proactive approach aimed at preventing the occurrence of this phenomenon within counselling fields.

1.2 Objective of this study

This study aims to explore towards an in-depth examination of the experiences of professional counsellors in their post graduate studying, focusing on three central facets: (i) the sufficiency of their self-care knowledge acquired during their graduate training in facilitating their adaptation to the demands of real-world practice, (ii) their perceptions regarding the significance of incorporating self-care training into the formal pedagogical curriculum for counselling trainees, and (iii) the prospective advantages that can be derived from the incorporation of such training prior to graduation.

2.0 Literature Review

Mental health professionals encounter unique challenges in their workplace that heighten the likelihood of experiencing burnout (Collins, et al., 2022, Rivera-Kloepfel & Mendenhall, 2023). While one might assume that mental health professionals are well-equipped to recognize, prevent, and address these negative consequences, they paradoxically report increased levels of stress, burnout, and compassion fatigue. Despite working in a field that advocates for the well-being of others, they often overlook their own mental health, as highlighted by Dattilio (2015). A systematic review examining burnout in mental health professionals revealed that, on average, they experience significant emotional exhaustion and moderate degree of depersonalization (O'Connor et al., 2018). Hence, proficient protective or rehabilitative interventions are needed (Rivera-Kloepfel & Mendenhall, 2023).

Driscoll et al. (2020), evaluate the link between self-care practises and their association with academic guilt, imposter syndrome, and burnout. Furthermore, the authors advocate for the inclusion of self-care as an integral component of professional conduct in the academic realm, emphasising the importance of both instructing and modelling self-care practises in order to adequately prepare mental health students for their future roles as productive and professional members. The authors suggest that burnout should not be viewed as an unavoidable part of our profession. They suggest that by taking proactive steps to promote self-care and address work-related issues that lead to burnout, the academic field can undergo a positive transformation. They propose making self-care a core professional practice and providing thorough training to graduate students in this area. This shift has the potential to create a healthier and more sustainable academic community (Driscoll et al., 2020).

3.0 Methodology

We conducted a qualitative study to understand the experiences of counsellors who are also doctoral students regarding self-care during their doctoral journey. To achieve this, we used an interpretive qualitative method, which included in-depth interviews, keeping journals for a month, and creating collages. These methods helped us gain insight into how counsellor doctoral students view the factors that support their self-care over time. In addition to semi-structured questions, we also used probing questions to delve deeper into important topics that emerged during the interviews. Twelve doctoral candidates, who are registered counsellors aged 28 to 43,

participated in the study. Ten of them were from three different public universities in Malaysia, and two were from private universities (one from Malaysia and the other from the United Kingdom). All participants have between 3 to 15 years of experience as registered counsellors. This process of data collection and analysis involves unbiased and ensured impartiality analysis, codes identification, theme formulation, data cleaning, and member checking. Subsequently, the data underwent analysis using NVivo 12 software.

According to the present data, 10 out of 12 participants in the individual in-depth interview emphasized the importance of self-care training, indicating that data saturation was achieved as no new information was gathered afterward. This justification for data saturation is supported by Hennink and Kaiser's (2022) systematic review. In their analysis of 16 tests using in-depth interviews, saturation consistently occurred within 25 interviews, typically ranging from 9 to 17 interviews, excluding unusual cases. This pattern held true across different methods, datasets, saturation objectives (codes vs categories), and diverse study populations. Another study suggests that choosing the higher end of this option (95% of the data) may require around 11 to 12 interviews. This is consistent with previous research indicating that about 12 interviews are commonly needed for a deeper understanding (Guest et al., 2020).

4.0 Finding

The analysis of the themes uncovers three distinct subthemes: (i) Insufficient exposure to formal self-care training, (ii) Significance of self-care training, and (iii) Necessity of modelling in self-care.

(i) Insufficient exposure to formal self-care training

Some participants receive self-care advice from their lecturers during master's programme, though not as part of a defined curriculum. They heard about self-care from their lecturer's discuss in class; yet, the importance of self-care was not fully understood until they began working as a counsellor. These findings align with the results of a previous study conducted by Barton (2020), wherein participants expressed a lack of comprehension and awareness of self-care throughout the early stages of their training, which improved as they gained practical experience in the field. The individuals had acknowledged their insufficient preparedness in their training, particularly with regards to the difficulties and requirements encountered in their professional duties. Moreover, Zahniser et al. (2017) asserted in their research that there is lack of educational interventions focused on self-care practises.

In a similar manner, almost 25% of the participants in the study conducted by Geary et al. (2023) expressed a lack of knowledge with the notion of self-care within the framework of their graduate education. Moreover, a significant number of students encountered challenges in incorporating self-care strategies into their graduate education as a result of the stringent demands imposed by the programme. The previously mentioned results suggest the need for curriculum adjustments in graduate training courses to include discussions on self-care, as well as to encourage faculty members to exhibit self-care habits. The students have suggested of some recommendations with the objective of enhancing the implementation of self-care. They proposed initiatives encompass the implementation of recurring self-care events on a weekly basis, inclusion of routine class discussions focused around the concept of self-care, the encouragement of taking personal well-being days off, the establishment of clear boundaries for email communication and response times, and the adjustment of syllabi to reduce excessive workload.

(ii) Significance of self-care training

The data obtained from the participants revealed that the idea of self-care often is subject to

neglect due to its perceived common nature. Taking part in dialogue, recognition, and contemplation are essential in order to reduce superficiality in the context of self-care and ensure a successful implementation of strategies. The completion of self-care training is a crucial prerequisite for counsellor trainee education. One of the participants, who is engaged in both academic and practitioner roles, possesses a dual perspective when tackling the issue in self-care. According to her statement, those who are engaged in the pursuit of a doctoral degree in academia frequently have shortcomings in prioritising their personal well-being. Individuals in this particular context exhibit a notable inclination towards their professional pursuits, rather than placing a higher emphasis on their overall well-being and personal lives. However, in her capacity as a counsellor, she recognises the inadequacy of this concept. She proposes that the inclusion of a self-care module within the master's course will yield beneficial results. The participant posits that it is important to educate counselling trainees not just on the practical aspects of self-care, but also on equipping them with the skills to advocate for and prioritise self-care in their own lives. The act of demonstrating a self-care model holds substantial significance as it serves as a guiding force for others.

The results of the current study align with other research, which suggests that implementing thorough self-care training for therapists should be seen as a crucial element within academic curricula (Barton, 2020). In a similar vein, Zahniser et al. (2017) propose that graduate training programmes should integrate formal teaching on self-care into their existing curriculum or offer particular workshops and seminars. A few studies offer comprehensive evidence supporting the necessity of incorporating thorough self-care training for counsellors as a foundational component in academic programmes (Geary et al., 2023, Barton, 2020)).

(iii) Necessity of modelling in self-care

Participants expressed their opinion that it would be helpful to extend an invitation to experienced counsellors in order to offer a practical demonstration of self-care approaches to the counselling trainees. While certain instructors may offer informal descriptions of their own experiences with self-care practises, there seems to be an absence of structured guidance on this topic. Merely providing instructions to a counsellor to tackle real-world difficulties is considered inadequate.

According to previous research conducted by Zahniser et al. (2017), it was suggested that gathering viewpoints from faculty members about their personal experiences in engaging in self-care and successfully integrating it into their demanding schedules would be advantageous. Similarly, the significance of including practitioner self-care into counsellor training was further emphasised by the participants in the research conducted by Baker and Gabriel (2021). Previous studies have provided comparable results, indicating that a considerable number of graduate students have voiced a strong inclination towards seeking faculty members who exhibit self-care practises. However, it is worth noting that instances of such illustration are hardly noticed in practise (Geary et al., 2023; Driscoll et al., 2020). The researchers in the literature advocate for the promotion of faculty members as exemplars of self-care, with the objective of developing a culture that places importance on and prioritises self-care within the realm of mental health education (Zahniser et al., 2017).

According to Barton's (2020) study, it was found that all participants held the belief that their personality or character played a significant role in motivating their decision to seek a career as a counsellor. Counsellors often possess a mentality or attitude that makes it challenging for them to decline requests and prioritise the needs of others over their own. Hence, it was suggested that the provision of supplementary training would have been beneficial in both recognising this motivation and facilitating improved self-care prioritisation. In addition, the cultivation of effective self-care habits can be seen as an essential aim for graduate students who are experiencing a challenging educational path and preparing to function proficiently, as self-care is considered an ethical obligation for professionals in the helping sector (Zahniser et al., 2017).

5.0 Implication

The research findings imply several significant considerations for the field of counselling. Firstly, it is imperative for institutions or programmes to equip counsellors with the essential competencies to advocate for and give priority to self-care in their personal life within a structured educational setting, prior to entering into their professional lives. Counsellors should prioritize self-awareness, recognizing their propensity to prioritize their clients' well-being over their own. This self-awareness is crucial for maintaining their emotional and mental health. Secondly, the research underscores the importance of consistent self-care practices for counsellors, as neglecting their well-being can have adverse effects on their mental and emotional states. Thirdly, in terms of education and training, programs should incorporate components focused on the realm of self-care, the significance of practical experience and the role modelling of self-care by experienced counsellors far outweighs mere theoretical discussion.

6.0 Conclusion

In a critical review, researchers expected that self-care could help to reduce burnout among mental health professionals but there are also other factors that need to be considered such as their personal traits (physical health, age, family life and experience in the field), and working hours might affect their well-being. (Rivera-Kloepfel & Mendenhall, 2023). Therefore, it is crucial to provide self-care training for counsellors, encompassing both personal and professional aspects. In conclusion, this study emphasises the importance of providing formal self-care training to counselling students as a crucial component of their preparation for entering the professional field. In order to effectively manage the demands of client care and personal well-being, counsellors must strive to achieve a harmonious equilibrium. This precise balance holds significant implications for the field of counselling and the mental health services.

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Irrational Beliefs towards School Counselor's Stress: A review and future agenda.

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Abstract

A school counselor's (GBK) health and well-being may be affected by an assortment of difficulties or stresses. There are various factors that contribute to stress, including external events and internal processes such as a person's belief system. We propose a conceptual framework that connects the idea of Irrational Beliefs (IBs) towards stress among GBK through analysis of the stress-related problems they face. The idea of IB is one cognitive element that can be utilised to more fully understand stress among GBK. Future research agenda on the IB dimension of GBK stress is also encouraged by the study, including model-building, psychoeducational and interventional modules, or instrument development. Therefore, the study is limited by the lack of relevant data on GBK and IB stress concerns, especially in domestic findings. This study can help future researchers examine the characteristics of the IB in addressing GBK stress-related difficulties by accounting for the proposed research subjects. All things considered, the future research on this can improve counseling services and enhance the wellbeing of GBK.

Keywords: school counselor stress, irrational beliefs, stress, beliefs system

1.0 Introduction

One of the worldwide concerns that is frequently discussed in different contexts and the present day is stress. Looking at current statistics, whether local or global, on stress-related issues, makes them rather concerning. Stress is commonly said to as exertion brought on by certain circumstances (Selye, 1973). Workplace stress is a common occurrence and is predicted to contribute to several worldwide health issues (WHO, 2021).

School counselor (GBK) are the most significant roles in education services in schools. They also dealing with issues related to stress and extreme fatigue (Roxas et.al. 2019). In general, their services include diverse task of services and cover a wide range of tasks. It is including improving student discipline and personality development, career education, psychosocial and mental health development, management work, teacher and parent consultation, meeting alternate class schedules, managing extracurricular activities, managing out-of-school task, and other assignments as needed (Surat Siaran Bil. 12 KPM, 2012).

Research indicates that as compared to other counselors, GBK is said to have greater levels of stress and emotional exhaustion (Bardhoshi et al., 2022). Extended periods of stress can have a negative impact on their productivity, personal health, and the quality of the services they provide, particularly when it comes to client therapy (Arnout & Almoied, 2021; Mullen & Gutierrez, 2016). This demonstrates the necessity for GBK to prioritise their well-being, particularly in light of stress's potential to interfere with and impair the efficacy of service

delivery.

To assist GBK who struggle with this stress issue, stress sources must be thoroughly and profoundly addressed to improve the effectiveness of problem-solving. Research on GBK stress, both domestically and internationally, is consistently conducted in order to get reliable data that may be utilised to address stress-related concerns in GBK communities. Many studies concentrate on the degree of stress and stress factors of GBK caused by external factors such as the workload of counseling and non-counseling tasks, role conflicts, vagueness in the field of duty, supervision, and student ratio (Holman et al., 2018; Richards et al., 2018; Wilder.,2018). But considering this from a cognitive perspective, such as their belief system, is also necessary because this element can affect a person's emotions and behaviour, particularly when they are under stress (Chan et al.,2021; Ellis et al., 2017; Millicent et al., 2021; Mullen, 2018).

Based on prior pertinent research, the purpose of this study is to determine the beliefs system components that may cause stress in GBK. It is also intended that by doing this study, further in-depth and thorough research on stress-related strategies for GBK would be benefited in the future.

2.0 Theoretical overview and literature synthesis

The phenomena of stress is dynamic and multifaceted. Stress-related problems are continuously being debated, and the field's expanding scholarship is changing to reflect these developments. Stress research is one of the fields of study that is expanding globally. According to Selye (1973), stress is a pressure that an individual experiences as a result of specific occurrences. Numerous theoretical perspectives exist on the fundamental notion of stress, with Dr. Hans Selye being the pioneer in introducing them in 1930. Furthermore, McGraths (1970) defined stress as a condition of imbalance between an individual's self-desire and their ability, with a high level of stress resulting from desires that surpass capabilities. According to this theory, stress can also result from a person's psychological makeup and how they behave inside.

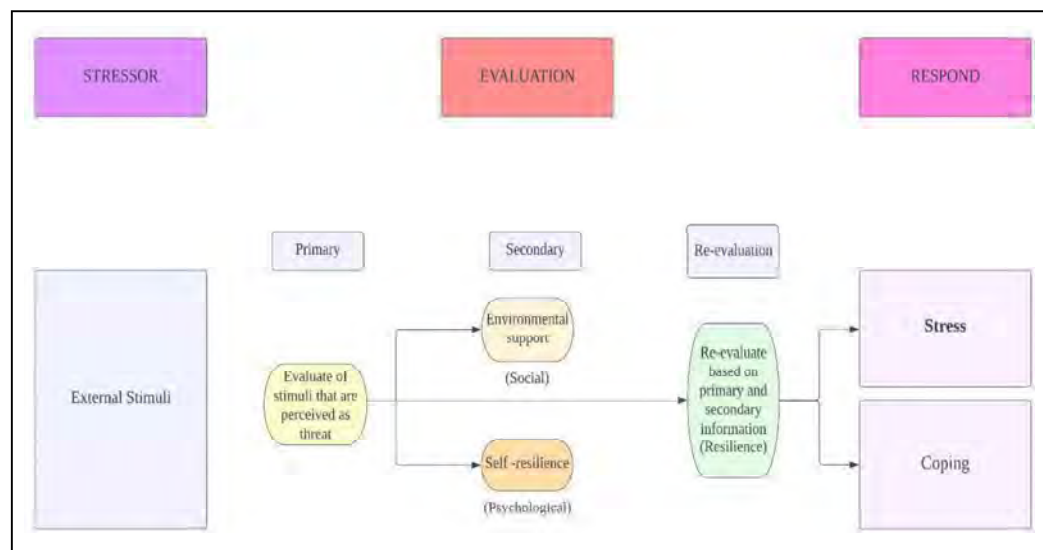


Figure 1: Model Framework for Stress Theory and Transactional Coping

Source: Lazarus & Folkman (1984)

Theory of Stress and Transactional Coping by Lazarus & Folkman (1984) is one of the models that explains the fundamental idea of stress by incorporating cognitive processes and the external environment. This introduced approach looks at the stress transmitted through from a

broader perspective. By examining this aspect of stress, one can see that it is not only brought on by external stimuli but also examines the cognitive process involved in forming opinions about them. A person's level of stress is also determined by how they interpret and translate the stimuli through an evaluation process that considers psychological concepts like resilience and social information like the surroundings. There are three stages to this appraisal process: primary, secondary, and cognitive reassessment, which incorporates data from the preceding stage. Next, there is the individual's reaction to the stimulus, which includes acting on the stimulus or becoming stressed in themselves.

Examining the stress model from above, the Theory of Rational Emotive Behaviour (REBT), first presented by Albert Ellis in 1960, is another model that highlights this aspect of cognitive evaluation. This REBT theory also makes use of a model called the A-B-C model, which examines how emotions and behaviour (C) are influenced by an activating event (A) as well as a person's beliefs system (B) (Ellis, 1996). This theory is one of the employed cognitive dimension techniques (Matweychuk et al., 2019). In both clinical and non-clinical domains, the efficacy of the REBT approach has been evaluated at several levels (David et al., 2018).

This beliefs system (B) turns into a fundamental framework that determines a person's sanity and serves as one of the defining factors in psychopathology (Abram & Ellis, 1994). A person's psychological health is significantly influenced by their belief systems regarding behaviour (Bond, 2017; Turner et al., 2019). In a number of scientific domains, including psychology, health, education, and sports, beliefs system research is expanding quickly abroad (Turner & Davis, 2018; Bernard et al., 2016).

The Irrational Beliefs (IB) is one that can be assessed in terms of cognitive dimension (Beck, 1995). One of the mental reasons of stress, IB can also lead to emotional disorders, particularly those associated to stress (Chan et al., 2021; Millicent et al., 2021). The ability to recognise and quantify an individual's cognitive patterns is crucial for assessing stress, and it also enables the modification and restructuring of that person's thought processes (Ellis et al., 2017).

Additionally, it has been discovered that IB is strongly linked to psychological stress issues as well as excessive exhaustion or burnout (Mansell, 2021; Mansel & Turner et al., 2022). Additionally, a strong correlation was discovered between it and anxiety and depressive symptoms (Turner et al., 2019). Research on intimacy-related behaviours, (IB) has demonstrated a strong correlation between stress and emotional and behavioural issues. In order to effectively treat psychological problems including stress, anxiety, and depression, cognitive therapists must first fully and profoundly recognise the signs of maladaptive thinking (Abbas et al., 2021; Davies, 2018; Margoni et al., 2023).

The concept of IB detection undergoes a swift transformation as a result of the conducted research. Ellis & Harper (1961) essentially identifies 11 list of IB. Cognitive processes that involve some more prominent and structured constructs, such as demandingness, awfulizing, low frustration tolerance, global evaluation, or self-downing, can also be used to identify the IB detection process (Ellis, 1994). Therefore, this IB component can be focused on to help detect GBKs' stress sources and produce a more comprehensive GBK stress profile.

3.0 Implication

The field of counseling has consequences, particularly for clinical interventions in counseling sessions aimed at treating GBK stress-related problems. The scientific field of stress-related counseling benefits from this finding. The deep cognitive component, where cognitive processes involving IB towards stress are consistently detected, is the primary target of intervention plans. These results can be applied to awareness programmes to help GBK become more conscious of stress in addition to treatment interventions. Additional consequences concern GBK's mental health and self-well-being. This is significant because GBK services, which are among the

services offering psychological support, are critical to preserving their mental readiness when assisting clients who might also suffer from serious disorders including trauma and crisis.

4.0 Future work

Examining the cognitive dimension as one of the components in resolving the issue of GBK stress is one of the future agenda recommendations that can be implemented. Researchers in the future can create a model to evaluate how IB components relate to other stressors. Furthermore, research on the development of psychoeducational modules for understanding and managing GBK stress can be conducted in relation to the guidance intervention process by offering more thorough details on the processes that lead to stress and how IB can impact an individual's reaction to a stressful event. By figuring out the cognitive processes at play and how to carry out the IB dispute process more skillfully, the counseling treatment intervention module may also be built. In addition to building models and modules, research on the development of IB detection towards stress instrument can be conducted in order to facilitate the identification of IB and to build a more thorough and in-depth profile.

5.0 Conclusion

Overall, GBK stress is one of the issues that needs to be investigated more thoroughly so that the process of dealing with this issue can be carried out holistically. In addition to stress factors such as those identified like workload of counseling and non-counseling tasks, role conflicts, vagueness in the field of duty, supervision, and student ratio, the cognitive dimensions such as IB on stress also need to be detected in an effort to provide interventions that are more accurate and appropriate to the GBK portfolio.

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Experiences Of Counselling Self-Efficacy & Training Program's Enhancement Strategies Among Counselling Students at Malaysia Higher Educational Institutions

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Abstract

The study aimed to explore the Malaysian counselling students' perception towards the counselling training program in shaping their counselling self-efficacy and the potential enhancement strategies in the counselling training program because it addresses a research gap by shedding light on the learning experiences and self-efficacy perceptions of Malaysian counselling students in the specialized training. Therefore, this study utilised a qualitative study design with a phenomenological approach. The selection of participants uses purposive sampling and snowball sampling, which consisted of recent counselling graduates who graduated within one year in the Master's counselling program that the Board of Counsellors Malaysia accredits at any Malaysian university. The data will be collected by using in-depth interviews and analyzed by using thematic analysis. The anticipated findings include identifying program aspects affecting students' counselling self-efficacy, which expect to inform best practices in counselling education, assist researchers in developing evidence-based strategies to enrich training programs, elevate counsellor education quality in Malaysia and foster positive changes benefiting students by improving the overall training experience.

Keywords: *counselling students, counselling training program, counselling self-efficacy, enhancement strategies, qualitative*

1.0 Introduction

Over the last 30 years, Malaysia has witnessed substantial development in its guidance and counselling profession, with the government actively fostering the growth of rigorous educational programs and regulatory bodies to ensure the quality of services (Ahmad et al., 2017). These programs, rooted primarily in American counselling approaches, have evolved over time to integrate various disciplines, including psychology, social work, and education. The Malaysian government's focus on accreditation standards, overseen by the Malaysian Board of Counsellors and supported by the Malaysian Counselling Association, has further solidified the profession's standards and regulation (Sumari et al., 2021). Education programs in Malaysia emphasize four key elements: knowledge, skills, research and assessment, and specialized areas, with a practical emphasis on internships and clinical training (Othman & Abdullah, 2015).

The journey towards becoming a certified counsellor in Malaysia necessitates enrollment in accredited counselling training programs, offered at various levels within higher education institutions (Amat, 2019). These programs aim to cultivate essential knowledge, skills, and experiences for aspiring professionals. With an increasing focus on students' self-awareness and reflective practice, these programs significantly impact the development of counselling students. Notably, recent adjustments due to the Covid-19 pandemic have led to changes in the learning process, with an increased emphasis on counselling in self-efficacy as a critical factor in

determining the quality of counselling services, particularly in Malaysia's multicultural context (Casada, 2022). The counselling training program serves as a foundational platform for students to develop their confidence and competency in providing effective counselling services.

2.0 Problem Statement

Recognized as pivotal in mental health settings, counsellors significantly influence the well-being of their clients, with counselling self-efficacy serving as a key predictor of counselling outcomes and overall effectiveness (Basma & Chen, 2022). Research has highlighted the dynamic nature of counselling self-efficacy, indicating its potential for improvement through various interventions, including modelling, performance feedback, and cognitive restructuring (Flasch et al., 2016). Consequently, understanding how training programs impact therapists' self-efficacy beliefs and incorporating effective interventions within the curriculum can significantly enhance client outcomes and well-being. Despite the acknowledged importance of counselling training programs in shaping students' capabilities, particularly their counselling self-efficacy, there remains a notable gap in qualitative studies focusing on this aspect within Malaysia's counselling education system. Thus, a comprehensive exploration of the variables influencing students' counselling self-efficacy within these programs is essential for the robust establishment of the nation's mental health framework (Basma & Chen, 2022).

In light of this, the present study aims to shed light on the experiences of counselling students in Malaysia, specifically focusing on their perceptions of how their training programs influence their counselling self-efficacy. By employing a qualitative approach, the research delves into the students' perspectives and experiences, providing valuable insights into the effectiveness of the counselling training programs within the context of Malaysia's higher educational institutions.

3.0 Research Objective

Based on the purpose of the current study, the research objectives are shown below:

1. To explore the Malaysian counselling students' perception towards the counselling training program in shaping their counselling self-efficacy
2. To explore the Malaysian counselling students' suggestions for potential enhancement strategies in the counselling training program for improving counselling students' self-efficacy

4.0 Research Focus

This study is focused on counselling students who have graduated within 1 year in the Master's counselling program that is accredited by the Board of Counsellors Malaysia at any Malaysia university.

5.0 Literature Review

Self-efficacy, defined as individuals' confidence in their ability to perform specific tasks, holds significant relevance in the counseling field, influencing the professional development of counselors and their capacity to assist clients effectively (Bandura, 1977). Counselling self-efficacy, particularly crucial in the context of counseling, encompasses counselors' beliefs in their competence to deliver effective counseling services, influencing their approach to challenges and the expectations they hold for positive counseling outcomes (Larson & Daniels, 1998). Key sources contributing to the development of self-efficacy include mastery experiences, vicarious experiences, social persuasion, and the monitoring of physiological and psychological states.

Understanding the multifaceted nature of counseling self-efficacy within training programs, as outlined by Bandura's Social Cognitive Theory (SCT), is vital for cultivating a mindset that perceives challenges as surmountable and achievable, ultimately impacting counseling behavior and outcomes (Bandura, 1991). Additionally, through structured training programs that facilitate skill development, ongoing professional supervision, and targeted interventions, counselors-in-training can build and maintain their sense of competence, resilience, and efficacy in the field (Urbani et al., 2002).

Counseling training programs, pivotal in equipping counselors with fundamental skills and micro-skills, form a critical phase in the education of future counselors (Harris & Flood, 2015). These programs, often structured in alignment with established guidelines such as those by CACREP in the United States and the Board of Counselor Malaysia, emphasize core areas of study, specialized tracks, supervised practicum and internship experiences, faculty qualifications, student outcomes, resources and facilities, and a continuous improvement process (CACREP, 2015; Lembaga Kaunselor Malaysia, 2016). These comprehensive training structures aim to foster the professional competence of counselors by providing a conducive learning environment and practical training opportunities, emphasizing the importance of program content and physical facilities in shaping the trajectory of counseling (Lembaga Kaunselor Malaysia, 2016). Research has consistently highlighted the positive impact of tailored training programs in enhancing counselors' therapeutic competencies and overall efficacy, underscoring the significance of program structure and elements in shaping trainees' counseling self-efficacy (Lannin et al., 2019; Ooi et al., 2018). Understanding the implications of various aspects within counseling training programs, such as role-play exercises, training models, and the integration of video demonstrations, is pivotal in shaping the attitudes and competencies of future counselors.

6.0 Methodology

The research design for the current qualitative study utilizes a phenomenological approach to investigate counseling students' self-efficacy within the context of Malaysian counseling training programs, aiming to comprehend the nuanced and subjective nature of their experiences and perceptions. By employing in-depth interviews as the primary data collection method, the study seeks to capture participants' individual perspectives and insights, shedding light on the elements that contribute to the development of self-efficacy and proposing potential areas for program enhancement. The selection of participants is conducted through purposive sampling, targeting recent Master's counseling graduates from Malaysian universities with accredited counseling programs, in adherence to the guidelines established by the Board of Counsellors Malaysia. The combination of purposive and snowball sampling methods ensures the recruitment of a suitable and diverse participant pool, with the aim of achieving data saturation with a sample size of 10 participants. The emphasis on data saturation rather than a predetermined sample size allows for a comprehensive and in-depth exploration of participants' experiences and perspectives.

6.1 Validity and Reliability

The research employed various strategies to ensure trustworthiness and rigor, with a focus on minimizing bias and maintaining credibility. To achieve this, careful attention was given to the selection of interview questions, employing probing techniques to explore participants' experiences within their own contexts. The use of member checking allowed for participant validation of the data, ensuring that their perspectives were accurately represented. Additionally, peer review was incorporated to obtain critical feedback from an expert in the field of Malaysia's counseling training program, ensuring the robustness of the research design and findings. Triangulation was also employed through data collection from diverse participants, places, and times, enhancing the reliability of the study's findings by cross-validating information from multiple sources. These strategies collectively strengthened the credibility and validity of the qualitative research process.

6.2 Instrument

The semi-structured interviews utilized in this study were carefully designed to ensure a comprehensive exploration of participants' perspectives on counselling self-efficacy and the impact of the counselling training program. Grounded in the existing literature on the subject, the interview questions were crafted to capture various aspects of participants' experiences, including their confidence levels, reflections on the training program's structure, and suggestions for program enhancement. The researcher's role in qualitative research was acknowledged as pivotal, with the researcher serving as the primary instrument for data collection and analysis. Their active involvement was considered essential in understanding the complexities and nuances of the participants' experiences, ensuring a comprehensive and insightful exploration of the research topic.

7.0 Data Analysis

Thematic analysis has been selected as the primary method for scrutinizing the data collected in this study. This approach aims to uncover patterns and meanings within the qualitative data, offering a systematic and comprehensive exploration of the participants' perspectives on counselling self-efficacy and the suggestions for improving the training program. The analysis will progress through six distinct phases, starting with the transcription of the recorded conversations, followed by open coding to identify significant statements. Subsequently, axial coding will facilitate the organization of data segments into logical categories, leading to the emergence of overarching themes. These themes will then undergo refinement to ensure coherence and clarity, with a focus on eliminating irrelevant or redundant elements. The final phase will concentrate on the validation of the findings to establish their credibility and reliability, utilizing techniques such as member checking, peer review, and triangulation to bolster the trustworthiness of the research outcomes (Nassaji, 2020).

By meticulously following this systematic approach, the thematic analysis will provide a comprehensive understanding of the participants' viewpoints, shedding light on the intricate nuances surrounding counselling self-efficacy and the impact of the training program. The data will be thoroughly examined and interpreted, offering valuable insights into the underlying themes that emerge from the participants' accounts, thereby contributing to a deeper comprehension of the research topic.

8.0 Discussion

The study's potential findings underscore the pivotal role of practical experience and mentorship in shaping counselling students' self-efficacy in Malaysia. Emphasizing the importance of hands-on training and constructive feedback from experienced practitioners, the research highlights the significance of enactive mastery experiences and effective supervision in bolstering students' confidence and competence in counselling. Additionally, the study underscores the importance of a well-rounded curriculum covering diverse areas such as cultural diversity and ethical considerations, alongside the provision of well-equipped facilities and a supportive learning environment. The findings also emphasize the influence of the social and cultural context, highlighting the role of peer support and the university climate in fostering students' self-efficacy. By addressing these key factors, counselling training programs can effectively prepare future counsellors, contributing to the enhancement of mental health services and the overall well-being of both counsellors and their clients in Malaysia.

9.0 Conclusion

In conclusion, this study emphasizes the vital role of counselling training programs in nurturing counselling self-efficacy among students in Malaysia. It underscores the importance of

practical experiences, mentorship, and a comprehensive curriculum in fostering confidence and competence among aspiring counsellors. The findings highlight the need for supportive learning environments and effective supervision to enhance the quality of mental health services. Overall, the study advocates for ongoing research and improvements in counselling training programs to meet the evolving demands of the field and ensure the provision of high-quality counselling services in Malaysia.

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The Effect of Adler's Marital Therapy Module on Conflict Strategies, Communication and Stress among Married Couples

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Abstract

This study aims to test the effectiveness of Adler's Marital Therapy on conflict strategies, communication and stress among married couples. This study used a quasi-experimental of pre-test, post-test, and follow-up test. The sample for this study is a married couples who are clients of the Counseling Office, Majlis Agama Islam Negeri Sembilan (MAINS) Port Dickson district. Married couples in this study characteristics were selected based on purposive sampling, the experiment group (n=30) and the control group (n=30). Study sample the experiment group received treatment Adler's Marital Therapy Module while the control group received no treatment. The questionnaires used are Romantic Partner Conflict Scale (RPCS), Marital Communication Inventory (MCI) and Perceived Stress Scale (PSS). Data were analyzed using descriptive and inferential statistics, non-parametric analysis of the Friedman Test. The results of the Friedman Test found that experiment group is effective in conflict strategies against the commitment, avoidance, interaction reactivity and dominance subscales. The follow-up test results also show that there is consistency for the subscale. The experiment group is effective in increasing communication and consistency of communication variables and effective in reducing stress and consistency of stress variables. This study gives implications for counselors to designing counseling sessions that involve elements of conflict strategies, communication, and stress among married couples. Suggestions for future research also broaden the study sample in urban and rural areas and discuss the spirituality of married couples.

Keywords: *Adler's Marital therapy Module, conflict strategies, communication, stress, married couple*

1.0 Introduction

The family is a structural unit consisting of legal marital relations (Antonovsky & Tourani, 1988). The family has a goal in develop a happy family by having positive, calm and happy relationships between family members. A happy family is able to build a prosperous family with a positive and happy personality (Pittman & Lloyd, 1988). However, there are certain challenges in trying to build a happy family. Among them are relationship conflicts, financial problems, career problems, children's problems, third party intervention and many others (McCubbin, Joy, Cauble & Cameau, 1980). These challenges are factors that contribute to stress in the family. When a family is faced with any issue, family members will be in a stressful situation. This unhealthy atmosphere of stress that affects the emotional, psychological and mental and in turn have a negative impact (McLanahan, 1983).

The relationship between husband and wife in overcoming marital there are various responsibilities and challenges. Married couples must be faced with misunderstandings, crises, various conflict problems in managing the household so that it brings stress. In a marital that is

built, the husband and wife must fulfill the roles and responsibilities of each other and there will certainly be disagreements to carry them out. According to Zainab Ismail et al., (2020), problems in marital can create stress and conflict for married couples, even if the marital is built on mutual love. Problems in marital can be hidden by troubled couples from being known by the public. However, when a divorce occurs, the problems that occur in marital can no longer be hidden from the knowledge of family members and society. According to Stern and Zevon (1990), stress stems from marital conflicts, conflicts between siblings and conflicts between parents and children.

The cause of misunderstanding between husband and wife is related to communication. According to Bell (1987) in Stinnett, et al (1991), the marital relationship is indirectly influenced by mutual understanding between spouses. Communication is seen to play an important role in influencing the relationship between spouses and can have an impact on the marital relationship. According to Noller (1993), communication is the need for married couples to feel what their respective partners want. Good communication such as paying attention to what he/she says makes the couple feel valued. Give space for the couple to express views and so a good listener to the couple can also further bridge the relationship between the two parties. If there is no communication between the spouses many problems will arise from it. From that to guarantee the happiness and harmony of the household, the couple must express all the problems faced or felt and discuss openly so that the conflicts experienced can be handled in the most appropriate way. Conflict is an inevitable part of family life.

Of the total 45,420 divorce cases registered in Malaysia in 2021, Selangor recorded 8,811 cases, followed by Johor 5,058 cases, Perak 4,215 cases and Kelantan 4,093 cases. Kedah recorded 3,873 cases of divorce, Pahang recorded 3,409 cases, Terengganu recorded 3,358 cases, Sabah with 3,027 cases, the Wilayah Persekutuan recorded 2,785 cases, Negeri Sembilan recorded 2,477 cases, Penang showed 1,932 cases, while Malacca with 1,597 cases and finally Perlis recorded 785 cases of divorce. The Malaysian Syariah Justice Department reported that among the main causes identified were lack of understanding between spouses, financial factors, failure to fulfill maintenance obligations, cheating spouses and family interference (report of the Malaysian Syariah Justice Department, 2021). Rika Fatimah (2008) this situation creates concerns about the integrity of the institution of marital in Malaysia especially for those who have stress in marital relationships caused by conflict and communication problems. This needs to be researched to provide common sense about the methods and ways that need to be paid attention to in helping married couples improve quality marital relationships. Somit (2015) reported that conflicts in marital can occur every month (1 to 2 times a month), even every week. This study found that 6 out of 10 people or 59.1 percent of couples experience conflict every week.

Thus, the discussion explained that it is the role of family and marital counseling services to help husbands and wife in family life who are seen as role models to children. A well-functioning family is a family that can effectively handle stress, conflict and problems and continue to function as a family. In order to enable it to function, of course, it depends on the structure and adaptive abilities of the family (Sapora Sipon & Ruhaya Hussin, 2012). In this regard, family and marital counseling services need to act proactively in an effort to help troubled marital relationships. According to Alan Gurman and David Kniskern (1991), discussion and negotiation strategies are among the main strategies in almost all approaches to marital therapy. Gabriel (2020) congruent communication lessons should be an important part of every counseling intervention for post-marital. This will allow the couple to alleviate persistent problems. Therefore, counseling intervention to troubled couples in marital is a therapy to help couples recover stressful situations and conflicts that occur in marital. Its function is so that they can return at least to the level of their function that existed before the time of the onset of stress and conflict (Aguilera 1998). According to Norhayati Mohd Noor (2012) most Malaysians are only open to

undergoing family/couple counseling when the situation in their family is critical. This causes intervention to be given only when the situation in the household has reached a critical level of upheaval which will make it difficult for marital counseling sessions to be carried out. When couples lack trust in the process of counseling sessions, this will cause implications for the effectiveness of the counseling process itself.

In the Malaysian context, Adler's Marital Therapy approach has yet to receive widespread attention to be applied by counselors in Malaysia. Even local studies of Adler's approach to marital therapy have not yet been discussed theoretically and applicatively. However, there are studies abroad that discuss the approach of Adler's marital therapy, especially to help improve marital relationships. But the results of overseas studies are still quite limited and poorly discussed. According to Norhayati (2013), there is a need to build specific modules that suit the background of the community in Malaysia related to the field of marital counseling. For that, marital in Malaysia needs to be more open and more innovative. This is a big issue because the effectiveness of module cannot be identified if no studies are conducted on its use in Malaysia. It is hoped that there are marital counseling researchers who can conduct a study on the use of modul so that the level of effectiveness in Malaysia can be identified before it is applied in any institution and family counseling service agency as one of the effective approaches in marital counseling in Malaysia. Siti Nubailah, Zuria and Salleh (2014) found that marital education is very necessary to be applied in married couples. However, there is a lack of research that focuses more on interventions or treatments that can guide and educate couples in forming skill-building in dealing with marital problems. In this study, The Adler's Marital Therapy Module was used by counselors to conduct marital intervention on married couples to improve conflict strategies, communication and reduce stress in the marital relationship. In this regard, this study aims to examine the effectiveness of The Adler's Marital Therapy Module on conflict, communication and stress strategies among married couples.

2.0 Literature Review

A study conducted by Bell (1987) in Stinnett, et al (1991) showed that understanding attitudes among married couples will indirectly affect marital relationships. Researchers in the field of marital counseling and communication, Gottmann and Silver (2000), found that discord in the household stems from negative communication that exists between couples. Among the negative communication that was found to have negative elements was the tendency of the partner to reprimand harshly, criticize the partner's attitude and personality, call the partner with bad calls, make annoying jokes, insult the partner, be defensive, refuse to talk, cannot control emotions well, refuse to forgive mistakes, do not want to improve relationships and focus bad memories in marital. Nurul Naimah and Mohd Yusri (2018) the challenge of managing family stressors such as bad attitudes of spouses, depression, in-law intervention, abuse or neglect. According to Salihu and Gholami (2018) stress in the household puts the family members in anxiety, resentment, frustration and despair which makes them recriminate each other.

In addition, based on previous studies also suggest that there is a need to build a specific module that fits the background of the Muslim community in Malaysia related to the field of marital counseling (Norhayati Md Salleh, 2013). For that, marital in Malaysia needs to be more open and more innovative. A study by Hamid Mohamad et al., (2020) also found that conflict management module will be proposed to help young newly married couples achieve functionality and quality in marital, especially in the first phase of marital. According to Lynn Gigy and John B. Kelly (1992), professionals in the field of mental health are faced with significant challenges in dealing with couples in need of marital therapy. This is because most couples who have marital problems never seek therapy. Between 80 and 90 percent of divorced couples reported that they did not consult a therapist for their marital problems (Halford et al., 2002).

The study of Ghasemi et al., (2020) found Adlerian Marital Therapy to be effective in reducing marital incompatibilities in couples. The results of this study are parallel to those of Rykova (2015) and Kermanshahi & Shafeiabadi (2014). Amani et al., (2018) found that Adlerian group counseling at the post-test and follow-up stages reduced marital disruption and interpersonal conflict among couples. On this basis, it can be said that this treatment is effective for researchers and family counselors to solve couples communication problems. While the study by Sodani et al., (2019) showed that Adlerian therapy was successful in improving and modifying psychological lifestyles as well as increasing couple happiness. This shows that there are not many references to past studies on the effects of Adler Marital Therapy discussed, and even there are no studies in the country that discuss the effects of Adler Marital Therapy. Thus, the researchers found that this study is different from previous studies because this study related to conflict strategies, communication and stress that have not been highlighted. Although there are studies conducted on Adlerian therapy in marital, the focus of this study is more on the context of the impact of the use of modules and varies in scope, respondents and objectives of the study.

3.0 Objective

- (i) Testing the effectiveness of Adler's Marital Therapy Module on conflict strategies among married couples.
- (ii) Testing the effectiveness of the Adler's Marital Therapy Module on communication among married couples.
- (iii) Testing the effectiveness of the Adler's Marital Therapy Module on stress among married couples.

4.0 Hypothesis

Ha1: There are significant differences in pre-test, post-test and follow-up tests on conflict strategies (sub scale of compromise, avoidance, interaction reactivity, separation, dominance and submission) between experiment group and control group.

Ha2: There are significant differences in pre-test, post-test and follow-up tests on communication between experiment group and control group.

Ha3: There are significant differences in pre-test, post-test and follow-up tests on stress between experiment group and control group.

5.0 Methodology

5.1 Research Design

This study is a quantitative study in the form of experiments to identify and empirically examine the impact of the Adler's Marital Therapy Module on conflict strategies, communication and stress among married couples. Quantitative design is suitable for descriptive studies while studies aimed at making explanations, experimental design is suitable for use (Robson, 2011). For experimental studies, researchers use quasi-experimental design because it is based on unequal groups (Campbell & Stanley, 1996) and does not involve random selection of respondents (Fraenkel & Wallen, 2008; Lim, 2007). This design is also always used when it involves the study of the effectiveness of a teaching method, module or program in various situations that cannot use pure experimental design (Asmah, 2008; Chua, 2006; Gribbons & Herman, 1997; Mok, 2009; Newman, 1991). Quasi-experimental design is used to replace pure experimental design when in the process of selection of study respondents, random distribution cannot be done by the researcher (Chua, 2006).

According to Chua (2011) quasi experiments involving pre-test and post tests are two-stage tests (before and after the experiment). The pre-test is conducted before the intervention is made while the post-test is conducted after the intervention is implemented. The follow up-tests were tested on respondents after four weeks of the module being implemented.

Table 1 summary of quasi-experimental studies for pre-test, post-test and follow-up test

Group	Pre-Test	Intervention	Post-Test	Follow up-Test
Experiment	O1	X	O2	O3
Control	O1	-	O2	O3

Hint:

A= Group the respondent involves intervention module

B = Group the responder not involve intervention module X = Intervention module

O1 = Measurement before Intervention (pre-test)

O2 = Measurement after intervention (post-test after 2 weeks) O3 = follow up-test after a period of four weeks

Table 1 shows the pre-test (O1), post-test (O2) and follow-up test (O3) for the experiment group and control group. Researchers used questionnaires to measure the difference between pre-test, post-test and follow-up tests. The pre-test was conducted before the intervention, while the post-test was conducted after intervention done and the follow-up test was conducted four weeks after the post-test to measure the consistency and impact of the module. The follow-up test given to experiment group and control group after four weeks of the intervention was carried out was intended to measure the consistency and consistency of the intervention effect within a specified period (Nor Hamizah et al., 2019; Azizi et al. 2008; Majidi & Rahmani 2016; Wilkes-gillan et al. 2016). Four weeks for the follow-up test is the minimum period of time to measure consistency compared to six months (Linda Jamaludin, 2020; Nor Hamizah, 2019; Ghazali Darusalam & Sufean Husin, 2018; Mohd Izwan Mahmud, 2017; Rosliza Ahmad, 2015).

5.2 Sample and Data Collection

The researcher found that non-random sampling is suitable for this study because it focuses on certain criteria and is in accordance with the focus of the research to be carried out. From Leedy and Ormrod (2005), purposive sampling is a sample that focuses on a particular group and is appropriate for the purpose of studying the causes of divorce. Therefore, in the context of this study, the researchers choose some married couples who want to get marital counseling services to improve the relationship and then maintain in the marital and do not want to go towards divorce. Married couples attend marital counseling sessions and are conducted in pairs using the Adler's Marital Therapy Module after individual counseling sessions are conducted. In the context of this study, 60 participants were involved among spouses, which means 30 people for each group, experiment group (n=30) and control group (n=30) who are clients of MAINS counseling office in the District of Port Dickson. The sample size recommendation for the experimental study was 30 people per group (Cohen 1998; Fraenkel et al. 2012; Gall 1996; Gay 2003).

The first phase, married couples who want to undergo marital therapy were selected as a sample in the experimental group, they underwent individual counseling sessions at the beginning and agreed to undergo marital counseling sessions with couples and were involved in undergoing modules conducted with registered counselors. The consenting spouse has been identified through an informed consent form. Then the couple is admitted into the experiment group and they have to engage 5 times meetings with counselors. According to Halijah Ibrahim and Nur Hikmah (2022), the implementation of counseling involving object relations requires at least five to seven meetings, some even longer. Counselors must complete eight hours and 45 minutes for all sub-

modules contained in the module which takes at least five meetings.

The study subjects selected in the experiment group specifically had the following criteria i) had undergone prior individual counseling sessions at least once; ii) spouses who wish to continue the marital relationship and do not want to divorce; iii) agreed to involve the couple in counseling sessions for treatment; iv) agreed to commit to attend treatment sessions with the couple; v) have a level of education; vii) the study subjects of couples should not attend any workshops or courses related to marital therapy while they are involved in the treatment. The counselors involved have prepared counseling session reports based on the meetings and modules conducted to the spouses in experiment group only.

In the first phase, couples who refused to participate in marital therapy were included as a sample in the control group where they only underwent individual counseling sessions and did not undergo marital counseling sessions with their partner. Individual counseling sessions to control group are conducted by different counselors. Examination and selection of study subjects is carried out before treatment begins. Married couples in control group have been identified through the informed consent form that has been given. Then the couple did not want to engage in marital therapy and they only came to the counseling service. The study subjects selected in the control group in particular have the criteria i) have undergone individual counseling sessions in advance one time; ii) spouses who want to continue the marital relationship and do not want to divorce; iii) have a level of education at least can read and write; iv) live together with the couple at the time of the study; vii) the study subjects of couples should not attend any workshop or course related to marital therapy while they are involved in the study. Different counselors have prepared reports of individual counselling sessions only for spouses in control group.

In the third phase, both subjects in experiment group and control group answered Romantic Partner Conflict Scale (RPCS), Marital Communication Inventory (MCI) and Perceived Stress Scale (PSS) questionnaires. The purpose of this screening process is to identify subjects who are weak conflict strategies, have communication problems and high stress as well as to avoid offering intervention to subjects who have a bad personality. After that, married couples in experiment group underwent a marital counseling session assisted by the module conducted by five counselors who had been appointed while control group only underwent individual counseling sessions with researchers and did not undergo any marital counseling sessions with their spouses. Both groups answered the same questionnaire during the same time period as the post-test and both groups answered the same set of questionnaires again. Also After 4 weeks for the follow-up test. The purpose of the follow-up test is to see the consistency and stability of any changes that occur in the affected group of modules (Salkind 2010).

5.3 Analyzing of Data

In this study, inferential statistical analysis was used to answer the objectives of the study by using a type of non-parametric test used Friedman test analysis. Friedman test is performed to determine the difference between two groups of samples that are paired alone or that are interconnected. The data collected is from ordinal scale data. Friedman test is an option of two-way ANOVA test when the number of samples used is too small in addition to the distribution of the data is not normal (non-normality) and unknown population variants. As the data was collected through pre, post and follow-up tests, each sample received different treatment through repeat measurement. Usually, the data used in the Friedman test is data from the ranking (ordinal, interval and ratio) whose data distribution is not normal. Some statistical practitioners explain the Friedman test is done in lieu of a bilateral ANOVA test that cannot be carried out because it does not meet its conditions (Ghazali Darusalam & Sufean Husin, 2016). Analysis of the study was using SPSS version 26 to obtain the difference of the pre-test, post-test and follow-up test.

6.0 Findings

Findings this section presents the results of inferential analysis of mean score distribution and the impact of module on conflict strategy variables based on differences in pre-test, post-test and follow-up test between experiment group and control group for the three variables. Analysis of conflict strategy variables were analyzed separately according to sub-scales in conflict strategy variables, sub scale of compromise, sub scale of avoidance, sub scale of interaction reactivity, sub scale of separation, sub scale of dominance and sub scale of submission. Result of analysis of mean score value for experiment group pre-test (sub scale of compromise M=2.91, SP= 0.86, sub scale of avoidance M= 2.91, SP= 0.70, sub scale of reactivity interaction M= 2.06, SP= 0.63, sub scale of separation M= 1.92, SP= 0.77, sub scale of dominance M= 1.26, SP= 0.74, sub scale of submission M= 2.33, SP= 0.58.

Table 2 mean scores of pre-test, post-test and follow-up tests for conflict strategy variables (compromise, avoidance, interaction-reactivity, separation, dominance and submission) communication variable and stress variable between EG and CG.

No.	Variables	Group	Pres Test	Post Test	Follow up Test
1.	Conflict strategies				
	Compromise	EG	2.91	3.36	3.41
		CG	2.39	2.33	2.34
	Avoidance	EG	2.91	1.65	2.02
		CG	2.77	2.96	2.98
	Interaction reactivity	EG	2.06	1.72	1.83
		CG	2.15	2.20	2.24
	Separation	EG	1.92	1.99	2.11
		CG	2.23	2.34	2.27
	Dominance	EG	1.26	1.19	1.12
		CG	1.60	1.57	1.59
	Submission	EG	2.33	2.31	2.21
		CG	2.39	2.45	2.45
2.	Communication	EG	1.49	1.88	1.90
		CG	1.47	1.44	1.45
3.	Stress	EG	2.37	1.40	1.52
		CG	2.43	2.39	2.44

6.1 The Effect of Adler's Marital Therapy Module for pre-test, post-test and follow-up test on conflict strategy variables (sub scale of compromise, sub scale of avoidance, sub scale of interaction reactivity, sub scale of separation, sub scale of dominance and sub scale of submission) between KE and KK

Alternatives hypothesis (Ha1) stated that there were differences in several conflict strategy variables (sub scale of compromise, sub scale of avoidance, sub scale of interaction reactivity, sub scale of separation, sub scale of dominance and sub scale of submission) for pre-test, post-test and follow-up test between experiment group (EG) and control group (CG). A statistical analysis of the Friedman test was conducted to measure the time effects of the three tests. The

results showed that the analysis of H_{a1} , the conflict strategy and its sub-scale in three different periods (pre, post and follow-up tests) between EG and CG:

Sub scale of compromise

The results showed that there was a significant difference in the pre-test against sub scale compromise between EG and CG based on the value of Chi-Square = 4.80, $dk = 1$ ($k-1$), $p = .028$. Based on the mean rank found CG 1.30 and EG 1.70. The alternative hypothesis was failed to rejected. The results showed that there was also a significant difference in the post-test on the sub scale of compromise between EG and CG based on the value of Chi-Square = 21.55, $dk = 1$ ($k-1$), $p = .000$. Based on the mean rank found CG 1.08 and EG 1.92. The alternative hypothesis was failed to rejected. The results showed that there was a significant difference in the follow-up test on the compromise sub scale between EG and CG based on Chi-Square values = 20.57, $dk = 1$ ($k-1$), $p = .000$. Based on the mean rank found CG 1.10 and EG 1.90. The alternative hypothesis was failed to rejected.

Sub scale of avoidance

The results showed that there was no significant difference in the pre-test on the evasion sub scale between EG and CG based on Chi-Square = 0.36, $dk = 1$ ($k-1$), $p = .549$. Based on the mean rank found CG 1.45 and EG 1.55. The alternative hypothesis was rejected. The results showed that there was a significant difference in post-test on the evasion sub scale between EG and CG based on Chi-Square = 15.21, $dk = 1$ ($k-1$), $p = .000$. Based on the mean rank found CG 1.85 and EG 1.15. The alternative hypothesis was failed to rejected. The results showed that there was a significant difference in the follow-up test on the avoidance sub scale between EG and CG based on Chi-Square values = 6.26, $dk = 1$ ($k-1$), $p = .012$. Based on the mean rank found CG 1.72 and EG 1.28. The alternative hypothesis was failed to rejected.

Sub scale of interaction reactivity

The results showed that there was no significant difference in the pre-test on the interaction reactivity sub scale between EG and CG based on Chi-Square values = 2.13, $dk = 1$ ($k-1$), $p = .144$. Based on the mean rank found CG 1.63 and EG to 1.37. The alternative hypothesis was rejected. The results showed that there was a significant difference in post-test on the interaction reactivity sub scale between EG and CG based on Chi-Square value = 7.76, $dk = 1$ ($k-1$), $p = .005$. Based on the mean rank found CG 1.75 and EG 1.25. The alternative hypothesis was failed to rejected. The results also showed that there were significant differences in the follow-up tests on the interaction reactivity sub scale between EG and CG based on Chi-Square values = 8.33, $dk = 1$ ($k-1$), $p = .004$. Based on the mean rank found CG 1.75 and EG 1.25. The alternative hypothesis was failed to rejected.

Sub scale of separation

The results showed that there was no significant difference in the pre-test on the separation sub scale between EG and CG based on Chi-Square value = 1.82, $dk = 1$ ($k-1$), $p = .178$. Based on the mean rank found CG 1.62 and EG 1.38. The alternative hypothesis was rejected. The results showed that there was no significant difference in post-test on the separation sub scale between EG and CG based on Chi-Square values = 2.79, $dk = 1$ ($k-1$), $p = .095$. Based on the mean rank found CG 1.65 and EG 1.35. The alternative hypothesis was rejected. The results showed that there was no significant difference in the follow-up test on the separation sub scale between EG and CG based on Chi-Square values = 0.14, $dk = 1$ ($k-1$), $p = .705$. Based on the mean rank found CG 1.53 and EG 1.47. The alternative hypothesis was rejected.

Sub scale of dominance

The results showed that there was no significant difference in the pre-test on the sub scale of mastery between EG and CG based on the value of Chi-Square = 0.62, $dk = 1$ ($k-1$), $p = .433$. Based on the mean rank found CG 1.57 and EG 1.43. The alternative hypothesis was rejected. The results showed that there was a significant difference in the post-test on the sub scale of mastery between EG and CG based on the value of Chi-Square = 4.80, $dk = 1$ ($k-1$), $p = .028$. Based on the mean rank found CG 1.70 and EG 1.30. The alternative hypothesis was failed to rejected. The results showed that there was a significant difference in the follow-up test on the sub scale of mastery between EG and CG based on the value of Chi-Square = 7.76, $dk = 1$ ($k-1$), $p = .005$. Based on the mean rank found CG 1.75 and EG 1.25. The alternative hypothesis was failed to rejected.

Sub scale of submission

Results showed that there was no significant difference in the pre-test on the sub scale of submission between EG and CG based on the value of Chi-Square = 2.46, $dk = 1$ ($k-1$), $p = .117$. Based on the mean rank found CG 1.57 and EG 1.43. The alternative hypothesis was rejected. The results showed that there was no significant difference in the post-test on the sub scale of submission between EG and CG based on the value of Chi-Square = 0.03, $dk = 1$ ($k-1$), $p = .853$. Based on the mean rank found CG 1.52 and EG 1.48, the alternative hypothesis was rejected. The results also showed that there was no significant difference in the follow-up test on the sub scale of submission between EG and CG based on the value of Chi-Square = 0.13, $dk = 1$ ($k-1$), $p = .715$, the mean rank found CG 1.53 and EG 1.47. The alternative hypothesis was rejected.

Table 3. Friedman test results for pre, post and follow-up tests for conflict strategy variables (sub scale of compromise, avoidance, interaction reactivity, separation, dominance and submission) between EG and CG

No.	Variable/ Sub scales	Test	Chi Square	dk	P value
1.	Conflict strategies				
	a. Compromise	Pre-test	4.80	1	< .028
		Post-test	21.55	1	< .000
		Follow-up test	20.57	1	< .000
	b. Avoidance	Pre-test	0.36	1	> .549
		Post-test	15.21	1	< .000
		Follow-up test	6.26	1	< .012
	c. Interaction reactivity	Pre-test	2.13	1	> .144
		Post-test	7.76	1	< .005
		Follow-up test	8.33	1	< .004
	d. Separation	Pre-test	1.82	1	> .178
		Post-test	2.79	1	> .095
		Follow-up test	0.14	1	> .705
	e. Dominance	Pre-test	0.62	1	> .433
		Post-test	4.80	1	< .028
		Follow-up test	7.76	1	< .005
	f. Submission	Pre-test	2.46	1	> .117
		Post-test	0.03	1	> .853

		Follow-up test	0.13	1	> .715

6.2 The Effect of TPA module on pre-test, post-test and follow-up tests for communication variables between EG and CG

Alternatives hypothesis (Ha2) states that there are differences in communication variables for pre-test, post-test and follow-up tests between EG and CG. The results of the Friedman test analysis of pre -, post-and follow-up tests between EG and CG, the study showed no significant difference in the pre-teston communication between EG and CG based on Chi-Square values = 0.57, dk = 1 (k-1), p = .450. Based on the mean rank found CG 1.43 and EG 1.57. The alternative hypothesis was rejected. The results showed that there were significant differences in post-test on communication between EG and CG based on Chi-Square value = 8.53, dk = 1 (k-1), p = .003. Based on the mean rank found CG 1.23 and EG 1.77. The alternative hypothesis was failed to rejected. The results also showed that there were significant differences in follow-up tests on communication between EG and CG based on Chi-Square values = 12.45, dk = 1 (k-1), p = .000. Based on the mean rank found CG 1.18 and EG 1.82. The alternative hypothesis also was failed to rejected. Table 4 below is the Friedman test results for pre-test,post-test and follow-up test for communication variables between EG and CG.

Table 4 Friedman test results for pre, post and follow-up tests for communication variables between EGand CG.

Variable	Test	Chi Square	dk	P value
Communication	Pre-test	0.57	1	> .450
	Post-test	8.53	1	< .003
	Follow-up test	12.45	1	< .000

6.3 The Effect of TPA module on pre-test, post-test and follow-up tests for stress variables betweenEG and CG

Hypothesis testing (Ha3) states that there are differences in stress variables for pre-test, post-test and follow-up tests between EG and CG. The results of the Friedman test analysis of pre -, post-and follow- up tests between EG and CG, the study showed no significant difference in the pre-test on stress between EG and CG based on Chi-Square value = 0.14 dk = 1 (k-1), p = .705. Based on the mean rank found CG 1.53 and EG 1.47. The alternative hypothesis was rejected. The results showed that there was a significant difference in post-stress testing between EG and CG based on Chi-Square values = 25.14, dk = 1 (k-1), p = .000. Based on the mean rank found CG 1.95 and EG 1.05. The alternative hypothesis was failed to rejected. The results also showed that there was a significant difference in follow-up tests on stress between EG and CG based on Chi-Square values = 22.53, dk = 1 (k-1), p = .000. Based on the meanrank found CG 1.93 and EG 1.07. The alternative hypothesis was failed to rejected. Table 5 below is the Friedman test results for pre, post and follow-up tests for stress variables between EG and CG.

Table 5 Friedman test results for pre, post and follow-up tests for stress variables between EG and CG

Variable	Test	<i>Chi Square</i>	dk	<i>P value</i>
Stress	Pre-test	0.14	1	> .705
	Post-test	25.14	1	< .000

	Follow-up test	22.53	1	< .000

7.0 Discussion

7.1 The Effect of Adler's Marital Therapy Module on conflict strategy (sub scale of compromise, sub scale of avoidance, sub scale of interaction reactivity, sub scale of separation, sub scale of domination and sub scale of submission)

Analysis of the study found that the mean scores of pre-tests and post-tests between EG and CG showed a significant increase in the sub scale of compromise and a significant decrease in the mean scores of the sub scale of avoidance, sub scale of interaction reactivity and sub scale of dominance. This explains the effect reported by EG after the module is carried out compared to CG. The findings of this study are in line with studies by Ghasemi et al., (2020) who found Adlerian Marital Therapy in married couples studied showed that this method was effective in reducing marital incompatibility in couples studied. The results of a three-month follow-up showed that these results remained stable, therefore, it can be concluded that Adler Marital Therapy is effective in reducing marital incompatibility in couples. Sodani et al., (2019) showed that Adlerian therapy was successful in improving and modifying psychological lifestyles as well as increasing the happiness of the experimental groups couples. Amani et al., (2018) showed that Adlerian counseling at the post-test and follow-up test reduced marital disruption and interpersonal conflict among couples in the experimental group.

The results of Friedman test analysis on the sub scale of conflict strategies, compromise, avoidance, interaction reactivity, separation, dominance and submission in a three-time test, namely pre-test, post-test and follow-up tests between EG and CG. The analysis showed there were differences for the sub scales of compromise, avoidance, interaction reactivity and dominance. This explains that the module effectively transforms compromise, avoidance, interaction reactivity and dominance into different scores. Conflict strategies in the marital is very important to ensure the happiness of the couple. Conflict strategies is also an issue in a marriage. Pietromonaco et al., (2004) suggested that in the face of conflict, the bond or attachment between partners can be threatened or can be strengthened. The ability to fully resolve conflicts will provide motivation to improve the quality of relationships. Positive relationships also stimulate couples to resolve domestic conflicts constructively.

A comparative analysis of post-test between EG and CG showed there was a significant improvement for the sub scale of compromise. This explains that after the intervention of module, EG was able to increase compromise i.e. they were able to find a mutually agreed agreement to solve the problem. Zacchilli et. al., (2009) noted compromise is usually considered a positive strategy because it satisfies aspects of each partner's desires or needs. Couples try to find a middle ground where neither side loses or wins. Couples apply this strategy to find a solution even if the solution is not necessarily the best solution (Lulofs & Cahn, 2000). According to Nur Faedah, Raihanah and Bahiyah (2020), maintaining morals and treatment such as compromising and understanding between spouses can guarantee the quality of marital to be built. This finding is supported by Tasew and Getahun (2021) reporting that couple respondents in the EG regularly practiced compromise techniques in conflict management.

Kieren, Maguire and Hurlbut (2001) propose more positive and more productive strategies among which are agreement or compromise, affirmation, reasoning and collaboration. Active listening, rational arguments and supporting the partner are related to conflict resolution. A study by Jacquelyn, Valerie and John (2015) found that when individuals are able to accurately describe their thoughts or feelings, they tend to feel more satisfied in their relationships and are therefore more willing to compromise during relationship conflicts.

The study also found differences in post-test between EG and CG for the sub scale of avoidance. Avoidance occurs when a person avoids conflict situations and according to Zacchilli et al. (2009), considered a more neutral form of conflict. Separation and avoidance are considered forms of conflict and research has not definitively determined whether they are associated with positive or negative outcomes. Therefore, the findings of this study explain that there is a reduction in avoidance in EG after the module intervention is carried out compared to CG. Couples in the EG showed more courage in dealing with conflict as one of the conflict strategies. When avoidance and retaliation exist in a relationship, efforts to solve constructive problems are hindered (McCullough & Witvliet, 2002). Several studies have found that part of the conflict avoidance tactic is to increase satisfaction (Gottman, 1993).

A study by Angélica, Adriana and Eduardo (2018) found that marital therapy has helped reduce the frequency of couple conflicts and also increased the frequency of use of positive resolution strategies and decreased the frequency of use of engagement and avoidance conflict resolution strategies. Five months after the end of the therapy, the results were better than before its start, showing moderate to high effects. The study also found a difference between EG and CG for the sub scale of interaction reactivity in the post-test. According to Zacchilli et al., (2009) interaction reactivity and dominance are commonly used when a person is focused on meeting his or her own needs rather than those of a partner, and thus tend to be associated with negative relationship outcomes. This explains that EG seeks to reduce interaction reactivity.

While CG maintains the reactivity of the interaction which is still the same aggressive and negative. To increasingly trust the partner and reduce negative interactions. To show a better interaction and they argue with a better voice and tone and avoid words that should not be. This is consistent with findings by Noller, Beach, and Osgarby (1997), who suggest that, when relationship partners have the ability to accurately describe feelings and emotions to their partners, as occurs when individuals practice the ability to describe aspects of consciousness, they are more likely to report higher levels of marital satisfaction. Jacquelyn, Valerie and John (2015) the more capable a person is in describing their feelings, the more likely a partner is to see their perspective and understanding each other's perspective is an important component that accompanies an individual's willingness to negotiate during a disagreement.

While the sub scale of dominance also shows the difference between EG and CG. EG study subjects showed a positive reduction in dominance in which they increasingly controlled their partners less by satisfying both parties and not forcing their partners to agree to their decisions. This strategy keeps one party motivated from within and strives to compromise. François, Thierry and Olga (2020) found that conflict strategy intervention has a positive impact on satisfaction and the process of discussion between couples to reach agreement. Their findings also found that interventions based on negotiation with third parties can have a beneficial effect on conflict resolution.

However, the study also found no significant difference for the sub scale of separation between EG and CG in the post-test. According to Zacchilli et al., (2009) separation and avoidance are considered nonvalent forms of conflict as well, and research has not definitively determined whether they are associated with positive or negative outcomes. This finding explains that EG and CG have similarities in separation strategies where both groups still leave conflict interactions after making arrangements or planning to discuss an issue and this finding does not determine whether the separation that occurs is positive or negative. There is one partner or both avoid conflicts that occur by intending to discuss together at other times. This shows the couple postponing the discussion so that they still feel separated from each other even though EG has increased the sub scale of compromise and reduced the sub scale of avoidance and sub scale of interaction reactivity, but on the sub scale of separation shows they have plans to discuss, but find another and more suitable time and space.

In addition, EG and CG also show similarities on the sub scale of submission. This explains

that both groups cannot yet agree with their partner to satisfy the partner or to completely end the conflict. Although EG has shown changes on the sub scales of compromise, avoidance, interaction reactivity and dominance, there are couples who have not been able to satisfy their partner or fully agree with their partner. So, it is likely that they will need time and time to better agree with their partner. According to Zacchilli et al., (2009) submission occurs when a person has low concern for his or her own needs and high concern for those of others. Although submission can serve to satisfy the couple, this style is ultimately not associated with a high level of satisfaction for the individual who drafted it.

A comparative analysis of the mean score of the follow-up test between EG and CG showed that there was a significant difference in the mean score for the sub scales of compromise, avoidance, interaction reactivity and dominance. This explains that after the intervention of the module, EG was able to maintain a positive sub scale mean score of compromise, avoidance, interaction reactivity and dominance. These results explain that the module managed to establish the consistency of mean scores for the sub scales of compromise, avoidance, interaction reactivity and dominance after the follow-up tests were carried out. The module not only affects the improvement of compromise, reduction of avoidance, interaction reactivity and dominance but also the consistency of scores after a period of time. At the same time CG who did not receive any intervention showed almost the same mean score for post-test and follow-up test. This explains the husbands and wives who do not receive the intervention are not able to make changes on all sub scales.

The findings of this study in line with Ghasemi et al., (2020) who found Adlerian Marital Therapy in couples studied showed that the results of a three-month follow-up showed that these results remained stable, therefore, it can be concluded that Adler Marital Therapy is effective in reducing marital incompatibility in couples. Amani et al., (2018) who found that Adlerian counseling at the post- test and follow-up test was able to reduce marital disorders and interpersonal conflicts among couples. On this basis, it can be said that this treatment is effective for researchers and family counselors to solve the couple's communication problems. Whereas Davis (2015) found that couples who participated in the EG intervention experienced an increase in conflict resolution compared to CG and this increase would be maintained over time (eight weeks after participating in the intervention). In addition, conflict resolution improved significantly from pre-to-post tests, and this improvement did not decline over time (on follow-up tests). These results are consistent with previous research on conflict resolution, which also showed evidence of improvements in conflict resolution (Durana, 1996; Hunt et al., 1998; Jakobowski et al., 2004) and the retention of these changes after intervention.

Ebrahimi (2018) showed that marital counseling significantly reduced marital conflict among couples in EG and increased their marital satisfaction compared to CG. Mohammad Tahan et al., (2020) found that psychoeducational therapy helped improve marital satisfaction and sexual function of married couples in the EG compared to the CG. Seyedeh, Mousavi and Seyedeh (2020) conflict resolution skills are generally capable of reducing conflict between divorced couples and improving their mental health. While researchers have identified constructive and destructive strategic approaches to conflict engagement, there is much more to learn about what underlies constructive rather than destructive strategic choices, particularly based on the emotional environment. of many episodes of conflict. Researchers suggest that mindfulness may be an important predictive variable in couple conflict (Jacquelyn, Valerie & John, 2015).

Meanwhile, families who did not receive any intervention showed the mean score of conflict strategy and its sub-scale were almost the same. The mean score explained that those who did not receive the intervention were unable to change conflict strategies. The findings of this study are in line with the previous study by Mousavi and Emadian, (2020), which found that there was a significant difference between marital conflict scores compared to CG. This finding is also in line with the findings of a study by Davis (2015) which found no significant difference between spouses on conflict resolution in pre-test and post-test.

7.2 The Effect of Adler's Marital Therapy Module on communication

Analysis of the study explained that after the intervention of the module, EG can increase the mean score of communication in the post-test. While the comparative analysis of the mean score of the post-test for CG showed that there was no increase in the mean score for communication and score consistency. This explains that the CG that did not get the intervention and the results the effect of the mean score did not show differences in the post-test. The results of the Friedman test analysis of communication in three different tests, pre-test, post-test and follow-up tests between EG and CG showed that there were differences in communication for the post-test between EG and CG. This explains that after the intervention of the module, EG can improve the mean score of communication in the post-test. While the comparative analysis of the mean score of post-tests for CG showed that there was no increase in the mean score for communication. This explains that the CG who did not get the intervention and the results the effect of the mean score did not show differences in the post-test.

The findings of this study were supported by Mahin Askari et.al (2013) found communication and problem-solving skills training to be effective at improving couples' mental health. The results also showed that couples who participated in communication and conflict resolution skills revealed positive levels of mental health in the EG. Therefore, mental health scores for participants who had undergone communication and conflict resolution skills training were significantly lower after treatment was carried out. Jane et. al., (2005) who found marriage and relationship programs provide benefits for couples for relationship satisfaction and relationship communication. Sanaee (1999) found the effect of communication training helped reduce marital relationship distress while Fincham and Beach (1999) believed that communication skills training taught the person how to be constructive to solve problems. Cherni (2013) found that effective communication strategy is to plan the communication process that is to choose the form of communication, time and place to do communication. According to Hardsen, positive communication is communication with the nature of open, honest and trusting each other (Siti Marziah et al., 2016).

The results of the follow-up tests for EG showed that there was a significant difference in communication. This showed that the improvement in communication could be maintained after four weeks of the intervention. The CG shows no difference. This explains that the CG who did not get the intervention and the results the effect of the mean score did not show differences in the post-test. These results support Davis' previous study (2015) which found that couples who participated in the intervention would experience an increase in effective communication compared to the control group and that this increase would be maintained over time eight weeks after participating in the intervention. François, Thierry and Olga (2020) found that intervention strategies have a positive effect on satisfaction and the process of discussion between couples reaching agreement. Nur Faezah and Bahiyah (2022) husband and wife communication plays an important and major role in maintaining relationships. Nuraini Nuri and Siti Marziah (2021) husband and wife need to constantly renew their way of communicating so that relationships are not bland in the household. But the key is through effective communication. Communication will lead to agreement in discussions, the formation of ideas or opinions and subsequently understanding will be obtained.

7.3 The Effect of Adler's Marital Therapy Module on stress

Comparative analysis of the mean scores of pre-test, post-test and follow-up tests between EG and CG on stress showed that there was a difference in stress for post-test and follow-up test between EG and CG. This explains that after the module intervention, EG was able to reduce the

mean stress score in the post-test compared to CG who did not receive the module intervention. The results of Friedman test analysis results to obtain a comparison of mean scores of pre-test, post-test and follow-up tests between EG and CG on stress. The study showed that there was a difference in stress for post-test and follow-up tests between EG and CG. This explains that after the module intervention, EG was able to reduce the mean stress score in the post-test compared to CG who did not receive the module intervention in this study. These results support previous studies of Kim et al., (2020) have constructed and evaluated the effectiveness of group counseling using Adlerian therapy and found it successful in reducing symptoms of anger, depression and anxiety in wives. Freeman, Carlson and Sperry (1993) Adlerian Marital Therapy strategies can be adapted to help middle-income couples deal with economic stress. While Jalilian et al., (2020) found that the Adlerian counseling method is effective in improving mental health and social adaptation in families.

While the comparison in the follow-up tests between EG and CG showed that there was a significant difference on stress. This shows that receiving the module creates a mean score consistency after several weeks of follow-up testing. The results showed that the module maintained the effect on stress levels after a consistent mean score after a period of follow-up testing. At the same time, CG who did not receive any intervention also showed almost the same mean communication score in the follow-up test. The mean score explained that those who did not receive the intervention did not have the ability to improve stress between spouses. Blanchard et al., (2009) found the effects of the program on post-testing for couples with high stress and on follow-up testing in the long term found reduced stress to couples. A previous study by Doaa Tony (2023) also found that marital therapy based on stress management can contribute to increased marital satisfaction especially in infertile women and the effect of therapy can remain three months after the last intervention (follow-up test). Byrne et al., (2004) confirmed progression of after intervention and follow-up intervention of couples within the scope of not being stressed about marital distress and maintaining these improvements six months to four years later.

8.0 Conclusion

In conclusion, conflict strategies, communication and stress among married couples can be helped and learned through appropriate interventions with them. This can be proven through this study and can support previous studies that prove marital therapy that uses a module approach can improve conflict strategies such as compromise, reduce avoidance, reduce reactivity of interaction, reduce dominance, improve communication in turn helps reduce the stress experienced in their marital relationship. Adler's Marital Therapy Module can be applied in the real field to married couple clients who want to get family and marital counseling services and guided by counselors. This study adds to the findings of studies related to family and marital counseling interventions through the development of module to help married clients face the challenges of marital and family.

The results of the Friedman test analysis found EG to be effective in improving conflict strategies (sub-scale of compromise, sub-scale of avoidance, sub-scale of interaction reactivity and sub-scale of dominance), improving communication and reducing stress. The results of the follow-up tests given four weeks after the end of the module intervention showed the consistency and stability of conflict strategy variables (sub-scale of compromise, sub-scale of avoidance, sub-scale of interaction reactivity and sub-scale of dominance), communication and stress for EG. The module is one of the effective interventions in marital counseling. However, there is still a lot of research to be done in the Malaysian context after this module was effectively used among married couples in Malaysia. It is hoped that more studies related to the module can be carried

out to help married couples get effective interventions and indirectly improve and improve marital relations and family relations in general, thus reducing the statistics of divorce in Malaysia.

9.0 Recommendations

Referring to the findings on the impact of the Adler's Marital Therapy Module on conflict strategies (sub- scale of compromise, avoidance, interaction reactivity and dominance), communication and stress on marital relationships, the module can be considered as an intervention that can be introduced after being tested for effectiveness in the context of experimental studies. The results of this study can be highlighted by relevant agencies in order to apply this marital therapy intervention to married individuals and married couples in marital counseling services. Through this intervention, it is proposed that the relevant agencies help improve the efficiency of counselors through the use of the module. The module can also be used through the marital program and can be compulsory for spouses to get to know their spouses even though they are married. Through this program can develop the skills of couples and improve the feeling of cooperation and harmony.

In addition, through this proposal it is also possible to contribute to the deeper exploration of new knowledge within the scope of the studied field. This study is a non-randomized type experimental study of experimental and control groups, pre-test, post-test and follow-up tests aimed at examining the effectiveness of the module intervention on conflict strategies, communication and stress among married couples. Quasi-experimental study design was used and the selection of study subjects was purposeful. This study is entirely a quantitative study i.e. experimental design. Therefore, only involve questionnaires and analyzed using SPSS software version 26. Therefore, it is suggested that future researchers can use qualitative methods such as interviews to study subjects so that it supports quantitative findings and can find out more about the effectiveness of the module that has been carried out. This study only involved subjects in Port Dickson District, and did not cover all districts in Negeri Sembilan. Therefore, it is suggested that future researchers may be able to expand the sample study and if it can make a comparison between the sample study as in urban and rural areas. This comparison aims to measure the difference in the effectiveness of the modules whether they have the same effect or on the contrary.

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Hubungan Antara Sokongan Sosial, Resilien dan Penyesuaian Kerjaya Dalam Kalangan Kaunselor Novis di Malaysia

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Abstrak

Penyesuaian kerjaya menggambarkan tahap kesediaan seseorang individu yang merangkumi sikap, kompetensi dan tingkah laku dalam menyesuaikan diri dengan persekitaran kerjaya pilihan. Dalam proses membuat penyesuaian kerjaya, sokongan sosial sama ada dari pihak keluarga, rakan mahupun individu yang signifikan mampu menyumbang kepada kesejahteraan diri. Namun, resilien juga merupakan faktor penyumbang kepada kejayaan seseorang kaunselor novis untuk bertahan apabila berhadapan dalam apa jua keadaan yang mengancam dan berisiko yang akhirnya boleh menjejaskan komitmen serta prestasi sekiranya tidak dapat diatasi. Penyelidikan ini adalah kajian konseptual yang mengkaji hubungan antara sokongan sosial dan resilien dengan penyesuaian kerjaya dalam kalangan kaunselor novis di Malaysia. Dapatan kajian ini boleh digunakan oleh pihak terlibat dalam merangka program bersesuaian dalam meningkatkan profesionalisme kaunselor novis di Malaysia.

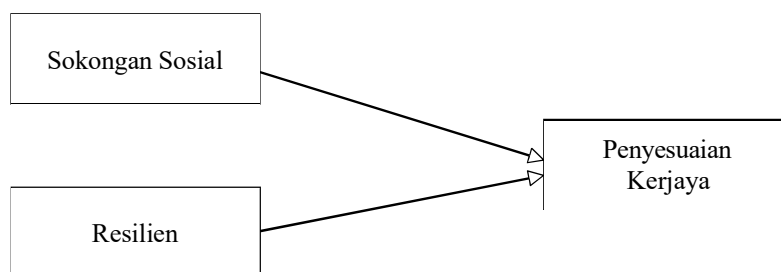
Kata kunci: sokongan sosial, resilien; penyesuaian kerjaya, kaunselor novis

1.0 Pengenalan

Kemajuan yang semakin pesat dan perubahan drastik dalam bidang teknologi akibat Revolusi Perindustrian Keempat atau Industri 4.0 secara tidak langsung telah menyebabkan bidang pengkhususan pendidikan serta pekerjaan turut berkembang. Namun, penularan wabak *Coronavirus* 2019 (Covid 19) di seluruh dunia sekaligus telah membawa perubahan besar kepada kehidupan manusia dari pelbagai aspek. Bukan sahaja ekonomi mula terjejas, sistem pendidikan dan pekerjaan juga turut terkesan dan perlahan – lahan kita mula mengadaptasi kepada kehidupan norma baharu, dengan setiap pekerjaan atau pembelajaran itu dijalankan secara dalam talian. Secara tidak langsung, keperluan untuk kemahiran penyesuaian kerjaya juga turut meningkat (Spurk, 2020; Guang et. al, 2020). Penyesuaian kerjaya adalah kemahiran yang perlu ada dalam diri seseorang individu dan menjadi satu keperluan bagi mendepani cabaran kerja hari ini. Malah, sudah menjadi *trend* dalam kalangan majikan untuk mencari pekerja yang dapat menyesuaikan diri dan bertindak balas dengan cepat untuk berubah serta dapat menangani pelbagai tugas akibat perubahan pantas yang berlaku dalam organisasi (Carter, 2019).

Kaunseling merupakan salah satu profesion yang memberikan bantuan psikologi kepada individu yang memerlukan pertolongan. Menurut Corey (2008), untuk menjadi kaunselor, seseorang itu perlu melalui proses pemerolehan identiti secara profesional dan proses ini sebenarnya telah menunjukkan perwakilan penyesuaian diri bagi profesion kerjaya mereka (Savickas, 2013). Secara tidak langsung, konsep kebolehsuaian kerjaya telah menunjukkan penyesuaian kerjaya diri terhadap profesion mereka. Menurut Yudi Kusyadi (2020) kaunselor berperanan dalam membantu meningkatkan keupayaan individu untuk penyesuaian kerjaya yang

berubah – ubah mengikut keadaan semasa. Namun, kajian Mazilah Ghazali (2017) mendapati kaunselor yang tidak mempunyai kemahiran dan kecekapan akan menjejaskan perkembangan dirinya seterusnya tidak dapat berfungsi sebagai seorang kaunselor yang berkesan. Oleh itu, keperluan kajian mengenai penyesuaian kerjaya dalam kalangan kaunselor novis penting untuk dijalankan (Yildiz & Dirik, 2016). Pengkaji telah menetapkan penyesuaian kerjaya sebagai pembolehubah bersandar. Manakala sokongan sosial dan resilien pula merupakan pembolehubah tidak bersandar seperti Rajah 1 bagi menjelaskan sokongan sosial dan resilien terhadap penyesuaian kerjaya dalam kalangan kaunselor novis di Malaysia.



Rajah 1: Perkaitan antara sokongan sosial dan resilien dengan penyesuaian kerjaya

2.0 Tujuan Kajian

Kajian ini membincangkan hubungan antara sokongan sosial, resilien dan penyesuaian kerjaya dalam kalangan kaunselor pelatih di Malaysia secara konseptual.

3.0 Kajian Literatur

3.1 Pendekatan Kemahiran Penyesuaian Kerjaya

Ramai pakar dari latar belakang yang berbeza telah menjalankan penyelidikan bagi memahami fenomena terkini dalam dunia kerjaya mengenai konsep penyesuaian kerjaya. Penyesuaian kerjaya adalah proses yang perlu dilalui oleh setiap individu merangkumi sikap, kompetensi dan tingkah bagi menyesuaikan diri dengan persekitaran pekerjaan serta organisasi. Dalam menghadapi tugas yang sukar diramal, tindak balas positif menunjukkan individu mempunyai keupayaan dalam menyesuaikan diri dengan pekerjaan tersebut. (Savikas, 1997). Selain itu, Hui dan rakan – rakan (2018) berpendapat bahawa perubahan dari sesi persekolahan ke bidang pekerjaan adalah mengikut laluan yang telah ditetapkan dan penyesuaian kerjaya berlaku apabila seseorang individu itu mulai bertindak, bertanggungjawab dan memberikan komitmen baik dengan pekerjaannya. Secara tidak langsung, menurut Savickas (2018) kepuasan perancangan kerjaya yang dipilih oleh seseorang bergantung kepada penyesuaian kerjaya yang dialaminya. Contohnya seperti kajian yang dilakukan oleh Nor Syazila Abdul Rahim dan rakan – rakan (2021) mendapati kecekapan dan keputusan dalam memilih kerjaya pelajar memainkan peranan penting sekaligus dapat meningkatkan penyesuaian kerjaya serta menyediakan mereka untuk kejayaan kerjaya di masa hadapan.

Kajian Zulhazmi (2019) juga mendapati penyesuaian kerjaya merupakan elemen utama dalam melaraskan penyediaan tenaga kerja dengan iklim pekerjaan masa kini. Hal ini kerana penyesuaian kerjaya yang rendah dalam kalangan graduan turut meningkatkan kadar pengangguran di Malaysia. Seterusnya, penstrukturan pekerjaan yang pesat dengan kemajuan teknologi juga mempengaruhi generasi semasa. Teknologi boleh menjadi pencipta pekerjaan baharu, tetapi teknologi juga boleh menjadi pemusnah yang menghapuskan pekerjaan (Mashelkar, 2018). Menurut Bal & Erkan (2019) daya saing antara manusia dan teknologi turut

menjejaskan pekerjaan tenaga kerja peringkat rendah dan pada masa yang sama meningkatkan pekerjaan tenaga kerja yang berkecukupan. Akibatnya, pasaran buruh akan menjadi lebih kompetitif sekaligus mengakibatkan peningkatan kadar pengangguran, ketidakamanan pekerjaan dan berlaku peralihan kerja dalam kalangan orang muda (Di Maggio et al., 2020). Solusinya adalah dengan membangunkan penyesuaian kerjaya pelajar termasuk kaunselor novis bagi memenuhi cabaran ekonomi global hari ini. Oleh itu, penyelidikan susulan mengenai penyesuaian kerjaya penting dilakukan di samping meningkatkan kemahiran serta latihan komprehensif dalam usaha membantu semua graduan termasuk kaunselor novis meningkatkan kemahiran penyesuaian kerjaya sebelum menceburi dunia pekerjaan.

3.2 Sokongan Sosial

Sokongan sosial merujuk kepada kepelbagaian bantuan yang diterima oleh seseorang sama ada dari sumber dalaman atau luaran melalui keluarga, ahli profesional (guru), rakan sebaya dan individu signifikan (Minghui et al., 2018). Kajian yang dilakukan oleh T. Mahfud et al., (2022) mendapati sokongan sosial memberi kesan langsung kepada penyesuaian kerjaya dalam kalangan pelajar politeknik di Indonesia. Selain itu, kajian yang dilakukan oleh Siti Hazimah Ghazali dan rakan-rakan (2019) mendapati penyesuaian kerjaya dan sokongan sosial berada pada tahap yang tinggi. Rakan merupakan individu signifikan yang paling banyak memberikan sokongan sosial dalam penyesuaian kerjaya guru pelatih berbanding dengan keluarga atau individu istimewa. Dapatan Lin Wang dan rakan – rakan (2017) mengenai penyesuaian kerjaya, sokongan daripada rakan sebaya adalah tinggi berbanding rakan sekerja dan keluarga. Secara tidak langsung, individu yang mempunyai lebih penyesuaian kerjaya mendapat penerimaan sokongan sosial yang baik daripada ibu bapa, rakan sebaya mahupun individu signifikan.

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Content Validity Evaluation of Instruments for Measurement of Counselling Ethics Competency and Self-efficacy in Dealing with Legal and Ethical Issues

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Abstract

Competence is needed to master challenging tasks and self-efficacy is associated with beliefs about what individuals can do with the skills they have to accomplish challenging tasks. The process of managing legal and ethical issues in counselling could be complex and ambiguous. To date, there is limited tools that could measure counselling ethics competency and self-efficacy levels specifically in managing legal and ethical issues. This study aims to evaluate content validity of adapted Counselling Ethics Competency Scale and Ethical and Legal Issues in Counselling Self-efficacy Scale in a sample of Malaysian registered counsellors. The content validation index was used to calculate the experts' agreement for content validity of the subconstructs. All the items for each subconstruct were comprehensively reviewed and the experts' agreement were all above .80. Therefore, the instruments are valid, and adaptation of such valid instruments is necessary to benefit the counsellors and society. The scales are expected to aid assessing Malaysian registered counsellors' counselling ethics competency and self-efficacy which eventually would provide information for program evaluation, supervision, and professional development of counsellors.

Keywords: *content validity, counselling ethics competency, self-efficacy, ethical issues*

1.0 Introduction

Ethical competency (EC) refers to ethical awareness, character strengths, and moral judgement skills. It requires experiences, good human communication, supportive surrounding, and ethical knowledge for EC achievement purposes (Pettersson et al., 2018). In this research, EC refers to Malaysian registered counsellors' ethics-related skills, knowledge, and awareness as documented in the Malaysian Counsellors Code of Ethics. On the other hand, self-efficacy in dealing with legal and ethical issues (SEDLEI) refers to individuals' confidence in applying legal and ethical knowledge (Mullen et al., 2014). Self-efficacy (SE) determines individuals' level of motivation that leads to successful accomplishment of tasks (Bandura, 1982). Therefore, individuals who score high in SEDLEI would be able to navigate the challenging legal and ethical issues. In this research, SEDLEI refers to the Malaysian registered counsellors' confidence specifically in managing legal and ethical issues across three factors: (a) general legal and ethical issues in counselling self-efficacy; (b) suicide, violence, abuse, and neglect self-efficacy; and (c) counsellor development and wellness self-efficacy.

Competence is needed to master challenging tasks and SE is associated with beliefs about what individuals can do with the skills they have to accomplish challenging tasks (Hendricks et al., 2005). Similarly, counsellors are expected to cultivate strong beliefs that they can deal with ethical issues efficaciously. Mullen et al. (2015) found that a higher legal and ethical SE was correlated with a higher general self-efficacy, legal, and ethical knowledge. This means that legal and ethical issues necessitate confidence and EC which includes knowledge in making decisions (Mullen et al., 2015). There was multiple research that discussed the perplexity of ethics. According to Mullen et al. (2014), there is no clear solution for every ethical issue. The process of managing legal and ethical issues in counselling could be complex (Li & Ai, 2020) and Warren et al. (2012) highlighted ethical issues alone could be complex and ambiguous. Furthermore, there is limited tools that could measure CEC and SE levels specifically in managing legal and ethical issues. Hence, this study aims to evaluate content validity of adapted Counselling Ethics Competency Scale (CECS) and Ethical and Legal Issues in Counselling Self-efficacy Scale (ELICES) in a sample of Malaysian registered counsellors. The limited resources to study SEDLEI and CEC offer insights on potential challenges. Moreover, limitation of resources is one of the constraints placed on the counsellor's ability to deal with legal and ethical issues.

2.0 Counselling ethics competency

CECS developed by Zakaria et al. (2020) is an instrument to measure the counsellors' counselling ethics-related awareness, skills, and knowledge. It is a 10-point Likert type scale ranging from strongly disagree (1) to strongly agree (10). There were eight measurable constructs in CECS that were derived from the Malaysian Counsellors Code of Ethics: (a) counselling relationship [CR]; (b) confidentiality, communication, privilege, and privacy [CCPP]; (c) professional responsibility [PR]; (d) relationships with other professionals [ROP]; (e) evaluation, assessment, and interpretation [EAI]; (f) supervision, training, and teaching [STT]; (g) research and publication [RP]; and (h) resolving ethical issues [REI]. Furthermore, CECS recorded a high internal consistency reliability with Cronbach's alpha coefficient value of .99. The scale also had a good construct, convergent, and discriminant validity. Example of items in CECS scale were: 'I respect my client's dignity' and 'I plan, design, conduct, and report research based on appropriate ethical principles'.

3.0 Self-efficacy in dealing with legal and ethical issues

ELICES was developed by Mullen et al. (2014). It is used to measure trainee counsellors' and practicing counsellors' confidence in facing legal and ethical issues in counselling. The ELICES consists of 23 items, and it is an 11-point Likert type scale ranging from cannot do at all (0) to highly certain can do (10). Furthermore, ELICES measures SEDLEI across three factors: (a) general legal and ethical issues in counselling self-efficacy [GEI]; (b) suicide, violence, abuse, and neglect self-efficacy [SEI]; and (c) counsellor development and wellness self-efficacy [WEI]. According to Mullen et al. (2014), the Cronbach's alpha coefficient of 23-item ELICES was .96, which indicated a strong internal consistency reliability. The internal consistency reliability values of the factors were .95, .94, and .84, respectively. Moreover, the ELICES demonstrated good construct and face validities (Mullen et al., 2014). Examples of items in the ELICES were: 'Recognize appropriate multiple relationships' and 'Describe the steps to take when facing an ethical dilemma'.

4.0 Methodology

Content validity is assessed by evaluating the appropriateness of the items and how it assesses the content of a measure (Hassan & Ghazali, 2012). Researchers recommended six to nine experts to evaluate content validity (Sowtali et al., 2016). In this research, six experts were appointed to evaluate content validity. Procedures to test content validity were as follows: (a) six experts who are registered counsellors working at various work settings evaluated all the measures; (b) each

expert received an evaluation kit comprising cover letter, scales, and evaluation form; and (c) experts reviewed whether the measures were operationally defined, grouped according to the theoretical construct, and measured what it was supposed to measure; and provided suggestions accordingly (Lam et al., 2018; Sowtali et al., 2016). The content validation index (CVI) was used to calculate the experts' agreement for content validity of the subconstructs. CVI accounted the average rating and level of suitability (Yusoff et al., 2018) ranging from 1 (Extremely Unsuitable) to 10 (Extremely Suitable) that were rated by the experts. The adopted CVI value was more than .80, as stated by Davis (1992), and the CVI values were calculated using Polit et al. (2007) formula:

$$\text{Content Validation Index (CVI)} = \frac{\text{Total Score Per Expert}}{\text{Total Actual Score}}$$

$$\text{Average Content Validity Index (CVI) Per Construct} = \frac{\text{Total CVI}}{\text{Number of Experts}}$$

5.0 Results and discussion

All the items for each subconstruct were comprehensively reviewed and the experts' agreement which was measured using CVI were all above .80 (See Table 1). The items were altered based on the comments provided by experts. According to the validation experts, several items were not measuring what it was supposed to measure and might be unsuitable for the local context. Consequently, these items were omitted (See Table 2). Furthermore, the experts mentioned that items reduction was necessary to reduce cognitive burden on participants or respondents' fatigue. Upon completion of the content validation process, the established items, constructs, and subconstructs were retained for a pilot test, followed by actual study.

Table 1. Content validation index

Construct	Subconstruct	CVI Expert 1	CVI Expert 2	CVI Expert 3	CVI Expert 4	CVI Expert 5	CVI Expert 6	Average CVI
CECS	CR	1.00	.86	.84	.90	.96	.80	.89
	CCPP	1.00	.90	.90	.90	1.00	.80	.92
	PR	.97	.87	.91	.90	1.00	.80	.91
	ROP	.97	.87	.90	.88	.93	.82	.90
	EAI	.94	.89	.85	.90	.94	.80	.89
	STT	1.00	.80	.93	.90	.99	.80	.90
	RP	1.00	.80	.91	.90	1.00	.84	.91
	REI	1.00	.87	.89	.90	1.00	.80	.91
ELICSES	GEI	.91	.87	.83	.90	.96	.80	.88
	SEI	1.00	.92	.80	.90	1.00	.80	.90
	WEI	.80	.90	.80	.90	1.00	.80	.87

Table 2. Number of items before and after content validation process.

Construct	Subconstruct	Before Content Validation	Items Modified	Items Removed	After Content Validation
CECS (70 items) After validation (54 items)	CR	7	1	2	5
	CCPP	7	3	0	7
	PR	8	3	1	7
	ROP	10	1	4	6
	EAI	10	2	3	7

	SST	9	4	2	7
	RP	10	4	2	8
	REI	9	3	2	7
ELICES (23 items)	GEI	13	2	6	7
After validation (15 items)	SEI	7	1	2	5
	WEI	3	3	0	3

6.0 Conclusion

All the items for each subconstruct were comprehensively reviewed and the experts' agreement were all above .80. Therefore, the instruments are valid, and adaptation of such valid instruments is necessary to benefit the counsellors and society. The scales are expected to aid in the process of assessing Malaysian registered counsellors' CEC and SE which eventually would provide information for program evaluation, supervision, and professional development of counsellors.

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Pengaruh Faktor Efikasi Kendiri, Trait Daya Tahan, dan Sikap terhadap Kesejahteraan Psikologi Guru Sekolah Kebangsaan di Perak

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Abstrak

Kerjaya guru pada masa kini merupakan salah satu kerjaya yang mempunyai tekanan mental yang tinggi. Kajian ini bertujuan untuk meninjau efikasi sendiri, daya tahan, sikap dan kesejahteraan psikologi guru di Sekolah Rendah. Selain itu, perbezaan berdasarkan jantina dan hubungan di antara efikasi sendiri, daya tahan dan sikap dengan kesejahteraan psikologi turut dikaji. Seterusnya, kajian ini juga mengenal pasti dan meneroka faktor yang menyumbang terhadap kesejahteraan psikologi guru sekolah rendah. Kajian ini menggunakan pendekatan kuantitatif dengan reka bentuk korelasi yang melibatkan seramai 80 orang guru daripada Sekolah Kebangsaan Tasik Damai, Ipoh Perak. Instrumen yang digunakan bagi kajian ini adalah instrumen Ryff's Psychological Well-Being Scale (kesejahteraan psikologi guru), instrumen Skala Guru Terhadap Perubahan (sikap guru), instrumen The Resilience Scale (daya tahan guru) dan instrumen Teacher Sense of Efficacy Scale (efikasi sendiri guru). Data kajian dianalisis dengan menggunakan perisian SPSS yang melibatkan analisis deskriptif dan inferensi. Dapatan kajian menunjukkan bahawa efikasi sendiri guru, daya tahan guru, dan sikap guru mempunyai hubungan dengan kesejahteraan psikologi guru di sekolah rendah. Kesemua faktor (efikasi sendiri, sikap dan daya tahan guru) merupakan faktor bagi kesejahteraan psikologi guru di sekolah rendah. Diharapkan kajian ini dapat dijadikan panduan oleh bahagian-bahagian tertentu seperti Jabatan Pendidikan Negeri dan pentadbir di sekolah dalam merancang dan melaksanakan program intervensi bagi meningkatkan kesejahteraan psikologi dalam kalangan guru sekolah rendah di Malaysia.

Kata kunci: *kesejahteraan psikologi guru, efikasi sendiri, daya tahan, sikap*

1.0 Pengenalan

Guru berperanan penting dalam melaksanakan dasar dan transformasi pendidikan yang ditetapkan oleh Kementerian Pendidikan Malaysia. Sehubungan itu, Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 menekankan peningkatan standard pembelajaran dan keluasan operasi bagi membangunkan kecemerlangan profesional. Hal ini demikian, guru-guru sama ada guru sekolah menengah atau guru sekolah rendah seharusnya mempunyai sikap yang positif, daya tahan, dan efikasi sendiri yang tinggi kerana ianya mempengaruhi tahap kesejahteraan psikologi mereka. Kesejahteraan psikologi merupakan indikator penting yang menyumbang kepada produktiviti kerja, tahap kesihatan mental dan fizikal seseorang (Angie, 2019). Kesejahteraan psikologi merujuk kepada keupayaan individu untuk menerima diri dan orang lain di persekitarannya, sentiasa positif dengan mengisi hidupnya dengan perkara-perkara yang bermakna buat dirinya dan orang lain serta mengetahui akan potensi diri serta mengembangkan potensi yang ada (Khoirani, 2018). Berdasarkan dapatan-dapatan kajian lepas, tahap kesejahteraan psikologi secara tidak langsung menyumbang kepada kepuasan kerja guru. Oleh yang demikian, kesedaran tentang mengekalkan sikap yang positif, daya tahan, dan efikasi

kendiri yang baik dapat membantu guru-guru untuk melalui liku dan cabaran sebagai pendidik dengan lebih berkesan (Triana, 2019). Justeru, kajian yang dijalankan berfokus kepada bagaimana sikap, daya tahan, dan efikasi sendiri mempengaruhi tahap kesejahteraan psikologi guru. Sehubungan itu, objektif yang ingin dicapai melalui kajian ini ialah:

1. Mengenal pasti tahap kesejahteraan psikologi guru, sikap guru, trait daya tahan dan efikasi sendiri guru di sekolah rendah.
2. Mengenal pasti perbezaan tahap kesejahteraan psikologi di sekolah rendah berdasarkan jantina.
3. Mengenal pasti perbezaan tahap kesejahteraan psikologi guru di sekolah rendah berdasarkan kategori umur (24-35 tahun, 36-45 tahun, 46-60 tahun).
4. Menentukan hubungan efikasi sendiri, trait daya tahan, dan sikap guru dengan tahap kesejahteraan psikologi guru di sekolah rendah.
5. Menentukan faktor yang mempengaruhi kesejahteraan psikologi guru di sekolah rendah.

2.0 Tinjauan Literatur

Kesejahteraan psikologi menurut Ryff (1989) merupakan keupayaan individu untuk menjalin perhubungan positif dengan masyarakat sekelilingnya, mempunyai makna dan objektif hidup, berkemampuan menangani konflik, mempunyai daya tahan, serta berkemampuan mengembangkan cita-cita dan potensi diri. Kesejahteraan psikologi merupakan sesuatu yang bersifat multidimensional dan didefinisikan dalam pelbagai bentuk (Hupert & So, 2013; Diener et al., 2010). Siti Taniza Toha (2003) menyatakan bahawa kesejahteraan psikologi merujuk kepada pengalaman dan kefungisian psikologi yang optimum.

Menurut Allport (1935), sikap ialah keadaan mental dan saraf yang bersedia, disusun melalui pengalaman, memberikan pengaruh arahan atau dinamik ke atas tindak balas individu terhadap semua objek dan situasi yang berkaitan dengannya. Zanna dan Rempel (1988), Sikap ialah penilaian keseluruhan sesuatu objek yang berasaskan maklumat kognitif, afektif dan tingkah laku. Mark Zanna dan John Rempel (1988) mendefinisikan sikap sebagai "pengkategorian objek rangsangan sepanjang dimensi penilaian."

Benders dan Jackson (2012), mendefinisikan daya tahan sebagai percaya pada diri sendiri akan kebolehan menempuh sesuatu cabaran dengan penuh cekap dan berkesan. Oleh yang demikian, dalam konteks kajian ini konsep daya tahan merujuk kepada kemampuan guru untuk bertahan dan beradaptasi dengan kesusahan yang dialami dan berkebolehan untuk bouncing back iaitu kembali stabil dari segi emosi dan fizikal setelah melalui sesuatu kesukaran dan pengalaman lepas tersebut menjadikan guru tersebut mempunyai daya tahan yang lebih kuat.

Efikasi sendiri guru pula didefinisikan sebagai keupayaan seseorang individu untuk mempercayai dan meyakini keupayaan mereka menyampaikan ilmu dalam pengajaran. Efikasi sendiri guru berdasarkan kajian yang telah dilaksanakan menunjukkan terdapat tiga elemen untuk mengenal pasti tahap efikasi guru iaitu, strategi pengajaran guru berkenaan, kaedah pengurusan di dalam bilik darjah dan penglibatan pelajar dalam pengajaran. (Roslee Talip & Tisebio Tiop 2020).

3.0 Metodologi

Kajian ini menggunakan pendekatan kuantitatif dengan menggunakan reka bentuk kajian korelasi dan regresi. Secara keseluruhan kajian ini akan menumpukan kepada mengkaji hubungan antara pemboleh ubah bebas dengan pemboleh ubah bersandar. Dalam kajian ini, efikasi sendiri, trait daya tahan dan juga sikap guru adalah pemboleh ubah bebas manakala kesejahteraan psikologi guru adalah pemboleh ubah bersandar.

Populasi bagi kajian ini adalah guru-guru di Sekolah Kebangsaan Tasik Damai, Ipoh, Perak. Jumlah guru atau populasi yang dijalankan adalah sebanyak 91 orang. Pengkaji menggunakan rumus Krecjie Morgan (2013) bagi mendapatkan jumlah sampel berdasarkan populasi dan jumlah sampel adalah sebanyak 75 orang. Persampelen rawak mudah telah digunakan bagi kajian ini. Instrumen yang digunakan bagi mengkaji kesejahteraan psikologi guru adalah instrumen Ryff's Psychological Well-Being Scale, instrumen Sikap menggunakan Skala Guru Terhadap Perubahan (SGTP) yang dibina oleh Tai dan Omar (2016), The Resilience Scale oleh Wagnild dan Young (1990) bagi konstruk daya tahan, dan Teacher Sense of Efficacy Scale (TSES) bagi konstruk efikasi sendiri. Jadual 1 menunjukkan nilai alpha bagi kesemua konstruk yang dikaji bagi kajian ini.

Jadual 1. Konstruk dan nilai alpha bagi item di dalam borang soal selidik		
Bahagian	Instrumen	Nilai alpha
A	Demografi Responden	-
B	Kesejahteraan Psikologi Guru	0.62
C	Sikap Guru	0.82
D	Trait Daya Tahan Guru	0.83
E	Efikasi Kendiri Guru	0.88

4.0 Dapatan Kajian

4.1 Tahap Kesejahteraan Psikologi Guru, Sikap Guru, Trait Daya Tahan dan Efikasi Kendiri Gurudi SK Tasik Damai

Hasil daripada data yang diperoleh menunjukkan tahap kesejahteraan psikologi guru di SK Tasik Damai berada pada tahap yang tinggi, manakala tahap sikap guru, trait daya tahan dan efikasi sendiri guru berada pada tahap sederhana. Jadual 2 di bawah menunjukkan hasil keputusan data kajian.

Jadual 2. Tahap kesejahteraan psikologi guru, sikap guru, trait daya tahan dan efikasi sendiri guru di SK Tasik Damai

Pemboleh Ubah	Min	SD	Tahap	Kedudukan
Kesejahteraan Psikologi	4.10	0.40	Tinggi	1
Sikap Guru	3.92	0.58	Sederhana	2
Trait Daya Tahan	3.78	0.51	Sederhana	4
Efikasi Kendiri Guru	3.85	0.48	Sederhana	3

Daripada data ini ianya menunjukkan bahawa kesejahteraan psikologi guru berada pada tahap yang paling tinggi diikuti dengan tahap sikap guru, kemudian diikuti dengan tahap efikasi sendiri guru dan di kedudukanterakhir adalah trait daya tahan.

4.2 Tahap Kesejahteraan Psikologi Guru Berdasarkan Jantina

Jadual 3. Ujian-t Tak Bersandar bagi Kesejahteraan Psikologi Mengikut Jantina

Jantina	Bilangan Sampel	Min	Sisihan Piawai	Nilai t	dk	Signifikan
Lelaki	24	4.125	.500	.272	34.012	.015
Perempuan	41	4.094	.351			

Bagi keseluruhan sampel, dapatan kajian menunjukkan terdapat perbezaan signifikan min Kesejahteraan Psikologi bagi pelajar lelaki ($M=4.125$; $SP=0.5$) dengan guru perempuan ($M=4.094$; $SP=0.35$; $t(34) = 0.272$, $p = 0.015 < 0.05$). Dapatan kajian juga menunjukkan guru lelaki secara signifikan lebih sejahtera psikologi berbanding guru perempuan. Oleh itu, terdapat perbezaan yang signifikan di antara tahap kesejahteraan psikologi guru lelaki dan guru perempuan di sekolah. Perbezaan magnitud adalah sederhana (eta squared adalah 0.03).

4.3 Tahap Kesejahteraan Psikologi Guru Berdasarkan Kategori Umur (24-35 Tahun, 36-45 Tahun, 46-60 Tahun)

Tahap kesejahteraan psikologi guru berdasarkan kategori umur adalah seperti di dalam jadual 4 di bawah:

Jadual 4. Jadual ANOVA Satu Hala Bagi Perbandingan Kesejahteraan Psikologi bagi guru berdasarkan kategori umur

Jantina	Jumlah kuasa dua	dk	Min kuasa dua	F	Signifikan
Antara Kumpulan	0.48	2	.240	1.509	.228
Dalam kumpulan	11.449	72	.159		
Jumlah	11.929	74			

Merujuk kepada jadual 4 di atas, didapati tidak terdapat perbezaan yang signifikan antara kesejahteraan psikologi guru [$F(2, 72) = 1.59$, $p = .228$] bagi kumpulan umur 25-35 tahun, 36-45 tahun dan 46-60 tahun. Ini menunjukkan bahawa guru di SK Tasik Damai daripada setiap kumpulan umur tidak berbeza dari segi kesejahteraan psikologi antara ketiga-tiga kumpulan umur.

4.4 Hubungan Efikasi Kendiri, Trait Daya Tahan, dan Sikap Guru Dengan Tahap Kesejahteraan Psikologi Guru di SK Tasik Damai.

Analisis statistik korelasi Pearson dijalankan ke atas tiga pemboleh ubah bagi mengkaji hubungan di antara efikasi kendiri, trait daya tahan, dan sikap guru dengan tahap kesejahteraan psikologi guru di sekolah kebangsaan. Jadual 5 di bawah menunjukkan hasil keputusan data kajian.

Jadual 5. Hubungan antara pembolehubah

Pembolehubah	Nilai r	Signifikan (p)	Interpretasi hubungan
Sikap Guru	0.329**	.000	Hubungan positif yang sederhana
Trait Daya Tahan guru	0.432**	.000	Hubungan positif yang sederhana
Efikasi Kendiri Guru	0.473**	.000	Hubungan positif yang sederhana

** $p < 0.05$

Merujuk kepada jadual di atas, berdasarkan tafsiran oleh Cohen, Manion dan Morrison (2017) terdapat hubungan positif yang sederhana yang mencapai tahap signifikan antara sikap guru dengan kesejahteraan psikologi guru sekolah kebangsaan ($r = 0.329^{**}$, $p=0.00$), terdapat hubungan positif yang sederhana antara trait daya tahan dengan kesejahteraan psikologi guru ($r = 0.432^{**}$, $p=0.00$) dan antara efikasi sendiri guru dengan kesejahteraan psikologi guru ($r = 0.473^{**}$, $p=0.00$). Ini menunjukkan bahawa sikap guru, trait daya tahan guru dan efikasi sendiri guru mempunyai hubungan positif yang sederhana dengan kesejahteraan psikologi guru.

4.5 Faktor Yang Mempengaruhi Kesejahteraan Psikologi Guru di SK Tasik Damai

Hasil analisis regresi pelbagai (kaedah stepwise) menunjukkan model regresi yang terdiri daripada efikasi sendiri, trait daya tahan dan sikap boleh menerangkan secara signifikan 58.2% daripada varians Kesejahteraan Psikologi Guru [$F_{(3,74)} = 12.127$, $p < .05$]. Oleh itu efikasi sendiri ($\beta = .281$, $t = 3.163$, $k < .05$), trait daya tahan ($\beta = .207$, $t = 2.503$, $k < .05$) dan sikap ($\beta = .142$, $t = 2.066$, $p < .05$) merupakan peramal signifikan kepada Kesejahteraan Psikologi. Persamaan regresi bagi analisis ini adalah:

$$\hat{Y} = .281x_1 + .207x_2 + .142x_3 + 1.683$$

5.0 Perbincangan Dan Implikasi Kajian

Kajian yang dijalankan adalah menggunakan pendekatan kuantitatif iaitu dengan reka bentuk korelasi di mana kesejahteraan psikologi guru adalah pemboleh ubah bersandar. Sikap, trait daya tahan dan efikasi sendiri pula merupakan pemboleh ubah tidak bersandar bagi kajian ini. Data kajian ini telah dianalisis dengan menggunakan IBM SPSS versi 27.0. Daripada analisis deskriptif min bagi kesemua pemboleh ubah berada pada tahap yang tinggi iaitu min bagi kesejahteraan psikologi adalah 4.104, min bagi sikap adalah $M=3.921$, min bagi trait daya tahan adalah $M=3.784$, dan min bagi efikasi sendiri adalah $M=3.851$. Hasil dapatan kajian menunjukkan bahawa kesemua pemboleh ubah tidak bersandar (sikap, trait daya tahan dan efikasi sendiri) ini mempunyai hubungan yang sederhana positif dengan pemboleh ubah bersandar (Kesejahteraan Psikologi Guru). Ketiga-tiga faktor ini menyumbang kepada kesejahteraan psikologi guru iaitu sikap, trait daya tahan dan efikasi sendiri seperti yang telah dibuktikan melalui ujian regresi pelbagai iaitu sebanyak 58.2% bagi model ini.

Guru lelaki lebih sejahtera psikologi berbanding guru perempuan kerana cara berfikir lelaki dan perempuan adalah berbeza. Menurut Matud, López-Curbelo, dan Fortes (2019), terdapat perbezaan yang signifikan di antara lelaki dan perempuan dalam kesejahteraan psikologi di mana lelaki mempunyai hubungan yang lebih signifikan dalam

penerimaan terhadap diri sendiri dan autonomi yang menyebabkan kesejahteraan psikologimereka lebih tinggi berbanding wanita. Tahap kesejahteraan psikologi guru di SK Tasik Damai berdasarkan kategori umur menunjukkan tidak terdapatnya perbezaan. Dapatan kajian ini disokong oleh kajian Lundmanet al. (2011), yang menyatakan bahawa tiada perbezaan yang signifikan di antara umur dengan kesejahteraanpsikologi.

Dapatan melalui analisis inferensi telah menunjukkan bahawa memang terdapat hubungan yang signifikan yang positif tetapi sederhana antara sikap dengan kesejahteraan psikologi guru ($r = 0.329^{**}$, $p < 0.05$). Sikap guru menerima perubahan memainkan peranan yang penting dalam kesejahteraan psikologi mereka. Kesejahteraan psikologi tidak akan dapat dicapai sekiranya guru mempunyai sikap yang negatif dalam kehidupan seharian. Trait daya tahan mempunyai hubungan yang signifikan dengan kesejahteraan psikologiguru ($r = 0.432^{**}$, $p = 0.01$). Guru perlu mempunyai daya tahan untuk mencapai kesejahteraan psikologi mereka. Hasil dapatan disokong oleh kajian oleh Brouskeli et al. (2018) yang mendapati terdapatnya korelasi yang positif antara daya tahan dan tahap kesejahteraan psikologi guru-guru. Terdapat perbezaan yang signifikan antara efikasi sendiri guru ($r = 0.473^{**}$, $p = 0.01$) dengan kesejahteraan psikologi guru. Dapatan ini juga selari dengan dapatan oleh Jay et al. (2020) yang menyatakan bahawa kesejahteraan psikologi mempunyai hubungan yang positif terhadap efikasi sendiri.

Konstruk pemboleh ubah tidak bersandar iaitu sikap, trait daya tahan dan efikasi sendiri guru dapat mengukur konstruk bersandar iaitu kesejahteraan psikologi sebanyak 58%. Selain itu, model kajian ini jugamampu memberi sumbangan secara praktikal apabila memberi gambaran secara lebih konsisten bahawa kesemua faktor peramal yang dinyatakan adalah signifikan menyumbang dan mempengaruhi kepada kesejahteraan psikologi guru dengan turut membuktikan bahawa faktor efikasi sendiri adalah pemboleh ubah paling dominan terhadap kesejahteraan psikologi guru di SK Tasik Damai.

6.0 Kesimpulan

Secara keseluruhan, dapat disimpulkan bahawa guru yang mempunyai sikap, tahap daya tahan dan efikasi sendiri yang baik mempunyai tahap kesejahteraan psikologi yang baik kerana berkemampuan untuk mengadaptasi diri dengan kesusahan yang dialami dalam hidupnya. Oleh itu pengkaji mencadangkan agar guru-guru mengamalkan keseimbangan kerja dan hidup dengan baik di samping menguasai kemahiran komunikasi secara berkesan untuk membina hubungan positif untuk mengekalkan kesihatan fizikal dan mental. Limitasi kajian ini adalah kajian ini hanya memfokuskan kepada guru-guru di sebuah sekolah sahaja. Oleh itu, kajian ini tidak dapat digeneralisasikan kepada keseluruhan guru di Negeri Perak mahupun di seluruh Malaysia. Seterusnya, sebagai cadangan kajian lanjutan, pengkaji seterusnya juga boleh meluaskan kajian ini kepada skop sekolah yang lebih luas seperti kesemua sekolah di Malaysia tanpa mengira sekolah rendah mahupun menengah dan boleh menambah pemboleh ubah lain seperti Sokongan Sosial, Spiritual Quotient (SQ) dan kecerdasan menghadapi cabaran (AQ) untuk menghubungkan kajian ini. Kajian berkaitan kesejahteraan psikologi dalam kalangan rakyat Malaysia adalah masih awal. Hal ini berikutan isukesihatan mental dalam kalangan guru sangat kurang dikaji dan masih tidak dapat digeneralisasikan di seluruh negara kerana kajian yang menunjukkan tahap kesejahteraan psikologi guru yang melibatkan semuanegeri juga masih belum dijalankan.

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