

Parental Career Support, Cognitive Barriers and Self-Efficacy: Implications for Developing Employability Skills in Vocational Students

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Abstract

While employability remains a pressing challenge in the Malaysian labor market, existing research has yet to offer a comprehensive understanding of how psychological, cognitive and social factors interact to shape students' readiness for employment. This study addresses this gap by developing a predictive framework that integrates these three dimensions to explain employability outcomes among vocational college students. Employability development in this context is influenced by the dynamic interaction of psychological health, cognitive well-being and social support systems that students experience throughout their learning process. Strategies to improve employability should focus on strengthening students' self-efficacy, reducing dysfunctional career thinking and strengthening balanced and constructive parental career behavior. By situating the research within the Malaysian vocational education context, this study contributes new empirical evidence to the literature, highlighting how parental influence, cultural dynamics and psychological factors jointly shape students' employability outcomes. The findings are expected to inform policymakers, vocational education institutions, educators and parents in designing more holistic and effective interventions to enhance the employability of vocational graduates in Malaysia.

Keywords: Career Self-Efficacy, Dysfunctional Career Thoughts, Parental Career Behavior, Employability Skills

Introduction

Countries worldwide increasingly recognize that economic competitiveness and sustainable growth depend on the development of a highly skilled and adaptable workforce (Oliinyk et al., 2021). Within this context, Technical and Vocational Education and Training (TVET) has emerged as a critical avenue for producing graduates who are not only equipped with technical knowledge but also endowed with employability skills that enable them to thrive in complex, dynamic, and competitive labor markets (Ahmad et al., 2023). TVET systems are thus positioned as central drivers of human capital formation, industrial productivity, and youth employability.

Malaysia, like many other countries in Southeast Asia, has made substantial investments in strengthening its TVET system as part of national strategies to cultivate human capital, enhance industrial productivity, and reduce youth unemployment (Abdul Rahim & Iqbal, 2025). The Malaysian Vocational Diploma (DVM) represents one of the key pathways designed to prepare students for direct entry into the workforce, particularly in technical and industrial sectors. As part of the Malaysia Education Blueprint 2015–2025 and the Twelfth Malaysia Plan, the government has emphasized equipping vocational graduates with the skills, adaptability, and confidence required by an evolving labor market (Ahmad Kamil et al., 2025; Yusop et al., 2023).

Despite these initiatives, challenges persist. Although the system seeks to produce competent, innovative, and competitive graduates, employment data reveal that a significant proportion of vocational diploma holders struggle to secure jobs or remain underemployed. For example, national graduate tracer studies show that 18.5% of vocational college graduates were unemployed after graduation, while 0.8% required additional training to enhance employability, and a further 1.4% reported low confidence in entering the labor market (Ministry of Higher Education, 2022). These figures raise critical questions regarding the readiness of vocational diploma graduates to meet industry requirements and highlight the need to revisit the multiple factors shaping their employability.

The issue of employability is not unique to Malaysia (Hu & Wang, 2024; Kee et al., 2023). Internationally, many TVET systems have grappled with a persistent skills mismatch between graduates and industry needs (Hondonga et al., 2021; Ibrahim & Mat Nashir, 2022). Employers frequently express dissatisfaction with graduates' preparedness, citing gaps not only in technical skills but also in transferable employability attributes such as communication, problem-solving, teamwork, adaptability, and leadership (Hoque et al., 2023; Mainga et al., 2022). Scholars have also pointed out that while vocational training often emphasizes practical competencies, it may underemphasize psychosocial and cognitive aspects that determine whether graduates can transition successfully into the workforce (Chang et al., 2022; Zheng et al., 2025). This broader international context reinforces the urgency of examining the structural, psychological, and social dynamics that shape employability outcomes for vocational diploma students in Malaysia.

One factor that has increasingly gained scholarly attention is career self-efficacy (Arghode et al., 2021; Livinți et al., 2021). Rooted in Bandura's (1977, 1997) social cognitive theory, career self-efficacy refers to individuals' belief in their ability to successfully engage in career-related tasks such as exploring options, making decisions, setting goals, and solving problems (Kleine et al., 2023; Makki et al., 2023). Higher levels of career self-efficacy have consistently been linked to stronger career adaptability, proactive job search behaviors, and higher employability (Gerçek, 2024a; Morici et al., 2022). Conversely, students with low career self-efficacy tend to experience difficulties in planning and pursuing career goals, often perceiving themselves as less capable of competing in the labor market. In the context of vocational diploma graduates, limited exposure to real-world professional environments, inadequate guidance, and lack of confidence may result in weaker career self-efficacy, thereby undermining employability (Liu, 2025; Wong & Umami Naiemah Saraih, 2024).

Alongside career self-efficacy, dysfunctional career thoughts also play a crucial role (Li & Lee, 2025). The Cognitive Information Processing (CIP) theory emphasizes that negative and irrational thought patterns such as excessive worry about failure, confusion in making career decisions, or pessimism about job prospects can hinder effective career development (C. Wang et al., 2025; B. Zhao et al., 2025). Students who internalize dysfunctional career thoughts may struggle to make informed choices, disengage from job-seeking activities, and underestimate the value of enhancing employability skills (Shin et al., 2019). The transition from education to work is already stressful, and the presence of such dysfunctional cognitive patterns can exacerbate feelings of uncertainty, reduce resilience, and diminish overall employability (Emerson et al., 2023; Wong Aitken et al., 2024). Addressing this psychological dimension is therefore critical for understanding why some vocational graduates, despite having technical skills, remain less successful in securing employment.

In addition to individual cognitive and psychological factors, the influence of the family environment—particularly parental career behaviors, cannot be overlooked (Davis-Kean et al., 2021; Liang et al., 2020). Parents often represent the primary source of guidance, encouragement, and social capital for young people navigating education and career choices (Boat et al., 2022; Jackson & Lambert, 2025). Supportive parental involvement whether through advice, role modeling, or facilitating exposure to career opportunities—has been shown to enhance students' confidence, motivation, and clarity in career decision-making (Agarwal et al., 2021; Alboliteh et al., 2022). Conversely, when parental involvement is absent, misaligned, or overly controlling, students may experience heightened confusion, limited aspirations, or reduced confidence in pursuing career paths (Guo, 2025). In Malaysia, where familial values and parental authority are culturally significant, the role of parental career behavior is particularly salient (Lansford, 2022; Sumari et al., 2020). Yet, this dimension remains underexplored in relation to the employability outcomes of vocational diploma students.

Bringing these perspectives together, it becomes evident that employability is not merely a function of technical competencies acquired through TVET curricula but is shaped by an interplay of self-beliefs, cognitive processes, and family influences. Nevertheless, despite the growing recognition of these factors, there remains a substantial research gap. Much of the existing literature on employability has centered on university graduates or broader higher education cohorts, with comparatively less attention given to vocational diploma students (Jackson & Tomlinson, 2020; Monteiro et al., 2022). Moreover, while studies have examined career self-efficacy, dysfunctional career thoughts, or parental behaviors individually, few have attempted to integrate these constructs into a holistic model of employability skills among vocational diploma students in Malaysia. This oversight is significant because vocational graduates often face distinct challenges compared to their university counterparts, including societal stigma toward vocational education, limited exposure to industry networks, and fewer opportunities for structured career guidance (Haviland & Robbins, 2021; Shimu & Haolader, 2025). Without addressing these specific realities, policy interventions risk being misaligned with the actual needs of vocational students.

Problem Statement

Graduate employability is one of the key indicators in evaluating the effectiveness of higher education institutions. However, data shows that the employment outcomes of graduates vary significantly across different categories of institutions. While a majority of graduates are able to secure employment, a considerable proportion continue their studies, engage in upskilling programs, await placement, or remain unemployed.

Table 1

Employment status by category of Higher Education Institution (HEIs)

Category of HEI	Employed (%)	Further Study (%)	Upskillin g (%)	Awaiting Placement (%)	Unemploy ed (%)	Total (%)
Public Universities (UA)	61.7	19.4	2.9	2.9	11.8	100
Private HEIs (IPTS)	58.5	17.1	1.3	3.5	19.7	100
Polytechnics	71.1	19.5	0.8	2.2	6.3	100
Community Colleges	72	21.9	0.2	0.7	5.2	100
Vocational Colleges (KV)	69.3	7.5	0.8	3.9	18.5	100
Training Institutes (MOHR)	59.4	22.5	0.5	0.6	16.9	100

Source: Tracer Study, MOHE (2022)

Table 1 highlights critical disparities in employment outcomes among Malaysian graduates across different categories of Higher Education Institutions (HEIs). While Polytechnics (71.1%) and Community Colleges (72.0%) report relatively high employment rates, Vocational Colleges (KV) the focal group of this study show a worrying unemployment rate of 18.5%, the second highest after Private Higher Education Institutions (IPTS) at 19.7%. This is particularly alarming because vocational education is explicitly designed to equip students with job-ready technical and employability skills for immediate entry into the labor market. In theory, vocational graduates should display smoother transitions into employment compared to graduates from more academically oriented institutions. However, the data reveal the opposite trend, thereby constituting a core problem that requires investigation.

The problem statement emerging from this observation is twofold. Firstly, there is a skills mismatch between what vocational colleges provide and what industries demand. Despite curricula emphasizing technical competencies, graduates may lack soft skills, adaptability, and confidence, which are increasingly valued by employers in a competitive job market (Young & Hordern, 2022). Secondly, the high unemployment rate among KV graduates suggests the presence of non-technical barriers such as low career self-efficacy, dysfunctional career thoughts, and limited parental support that undermine employability outcomes.

In comparison, institutions such as Polytechnics and Community Colleges, which also fall under the TVET category, show much better employability results. This raises the question: Why are vocational college graduates less employable despite undergoing similarly industry-oriented training? The relatively lower rate of further study among KV graduates (7.5%) compared to polytechnics (19.5%) and community colleges (21.9%) further

exacerbates the problem, as it implies limited upward mobility and fewer opportunities to compensate for initial skill deficits.

Thus, the statistics in Table 1 provide empirical evidence that the issue of graduate unemployment among vocational diploma holders (DVM) is not simply an economic or structural problem but also reflects psychological and social dimensions that need deeper exploration. Graduates may be technically trained but lack confidence in applying for jobs, struggle with negative thought patterns regarding their career prospects, or fail to receive adequate parental guidance and encouragement in navigating the labor market. These interrelated factors contribute to the persistently high unemployment rate among KV graduates, signaling an urgent need for research that integrates both technical and non-technical determinants of employability.

Despite national efforts to strengthen TVET and improve graduate employability, a substantial proportion of vocational diploma graduates remain unemployed (18.5%). This paradox indicates that employability is influenced not only by technical competencies but also by psychological factors such as career self-efficacy, dysfunctional career thoughts, and social factors such as parental career behavior. Without addressing these underlying issues, vocational education risks failing in its primary mission of preparing graduates for meaningful employment and contributing to Malaysia's economic development.

Table 2

Distribution of Malaysian graduates by type of HEIs and reasons for being unemployed

Reason for unemployment	UA (%)	IPTS (%)	Poly (%)	Community College (%)	Vocational College (%)
Actively seeking employment	77.6	70.3	71.9	72.5	72.5
Job offered not suitable	0.2	0.4	0	0	0.1
Lack of self-confidence to work	1.9	1.6	1.6	3	1.4
No interest in working	0.3	0.5	0.8	1.1	0.2

Source: Tracer Study, MOHE (2022)

Table 2 provides insights into the underlying reasons why Malaysian graduates across different Higher Education Institutions (HEIs) remain unemployed. The majority of unemployed graduates, regardless of institution type, reported that they were "actively seeking employment", with percentages ranging from 70.3% (IPTS) to 77.6% (Public Universities). For Vocational Colleges (KV), 72.5% of unemployed graduates were still actively seeking jobs, indicating that these graduates are indeed motivated to work but face structural or personal barriers that prevent them from securing employment.

Interestingly, a smaller but significant proportion of graduates reported "lack of self-confidence to work" as a reason for unemployment, with Vocational Colleges recording 1.4%. While the percentage may appear modest, it highlights an important psychological barrier: despite being trained in technical skills, some graduates lack the confidence to apply their knowledge in professional settings. This resonates with the concept of low career self-efficacy, where students doubt their own ability to perform career-related tasks, make

decisions, or compete in the job market (Bandura, 1986; Lent et al., 1994). Such self-doubt directly undermines employability.

The data also show that job unsuitability is almost negligible among KV graduates (0.1%), which suggests that the unemployment problem is less about job mismatch and more about the graduates' readiness to transition into the labor market. Similarly, "no interest in working" accounts for only 0.2% of KV graduates, reinforcing that the issue does not stem from a lack of motivation but from deeper psychological and social challenges. When linked with the earlier evidence from Table 1, Table 2 strengthens the Problem Statement. Although vocational education is intended to produce graduates who are readily employable, a significant portion (18.5%) remain unemployed, and among those, many report low self-confidence as a barrier. This indicates that the problem is not simply a deficiency in technical competencies but also lies in psychological constructs such as career self-efficacy and dysfunctional career thoughts. Furthermore, given the cultural significance of family in Malaysia, parental career behavior may also play a role in either reinforcing or alleviating these psychological barriers.

Thus, the integration of Table 1 and Table 2 highlights a paradox: Vocational College graduates are trained for immediate employment, yet they face higher unemployment rates and psychological obstacles that undermine their transition to work. This substantiates the urgency of examining how career self-efficacy, dysfunctional career thoughts, and parental career behavior influence employability among vocational diploma students.

The present study seeks to address this gap by investigating how career self-efficacy, dysfunctional career thoughts, and parental career behavior collectively influence the employability skills of vocational diploma students in Malaysia. The rationale for this inquiry is grounded in both theoretical and practical considerations. Theoretically, the integration of social cognitive career theory (SCCT), cognitive information processing theory (CIP), and parental socialization frameworks provides a comprehensive lens through which to understand employability. Practically, understanding these dynamics can inform targeted interventions in vocational colleges, such as career counseling programs, parental engagement initiatives, and training curricula that emphasize not only technical competencies but also confidence building, cognitive restructuring, and career resilience.

The urgency of such research is underscored by the socio-economic implications of graduate unemployment and underemployment. As Malaysia aspires to transition into a knowledge-based economy, the mismatch between graduates' skills and labor market demands poses risks to national productivity, social cohesion, and individual well-being (Yean et al., 2024). Unemployed or underemployed youth often experience frustration, financial insecurity, and reduced quality of life, while industries face shortages of adequately skilled workers. For vocational graduates, whose qualifications are explicitly designed to prepare them for direct employment, the inability to secure jobs represents not only a personal setback but also a systemic failure in aligning education with labor market realities. This makes it imperative to explore psychological and familial factors that may either support or hinder the employability of vocational diploma students.

This study therefore contributes to the field in several important ways. First, it extends existing research on employability by focusing specifically on vocational diploma students, a group that has often been overlooked in Malaysian and international scholarship. Second, by simultaneously examining career self-efficacy, dysfunctional career thoughts, and parental career behaviors, the research provides a multidimensional understanding of employability that captures the interrelationship between individual, cognitive, and social factors. Third, the findings are expected to offer practical insights for policymakers, educators, and industry stakeholders seeking to design interventions that go beyond technical training and address the psychosocial determinants of employability. Finally, at the societal level, enhancing the employability of vocational graduates can help reduce youth unemployment, mitigate skill mismatches, and foster greater equity in access to meaningful careers.

In conclusion, while technical and vocational education plays an indispensable role in preparing Malaysia's workforce for the demands of the global economy, the employability of vocational diploma graduates remains a pressing concern. Existing evidence highlights the importance of career self-efficacy, dysfunctional career thoughts, and parental career behaviors, yet the interaction among these factors has not been sufficiently studied within the Malaysian context. This research seeks to fill that gap by systematically analyzing how these dimensions influence the employability skills of vocational diploma students. By doing so, it aims not only to advance theoretical knowledge but also to inform practical strategies for strengthening TVET outcomes, empowering graduates, and supporting Malaysia's broader socio-economic development.

Literature Review

The concept of employability has been extensively discussed in higher education and labor market research, particularly in relation to graduates' transition from education to work. Employability is generally defined as a set of achievements, skills, understandings, and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations (Behle, 2020; Byrne, 2022). In the context of Technical and Vocational Education and Training (TVET), employability skills encompass not only technical competencies but also transferable skills such as communication, teamwork, problem-solving, adaptability, and self-management (Mahajan et al., 2022; Tushar & Sooraksa, 2023). These attributes are increasingly valued by employers who demand graduates capable of contributing effectively to dynamic workplaces (Herbert et al., 2020; Okolie et al., 2019). For vocational diploma graduates, employability is crucial because their programs are specifically designed to prepare them for immediate labor market entry, and deficiencies in employability skills may directly translate into unemployment or underemployment (Okolie et al., 2020).

Scholars argue that employability should be viewed as a multidimensional construct influenced by individual, educational, and contextual factors (Ergün & Şeşen, 2021; Römgens et al., 2020). In particular, psychological and social determinants have attracted growing interest, as technical training alone does not guarantee employment outcomes. In Malaysia, national policies such as the Malaysia Education Blueprint emphasize employability as a core graduate attribute, yet tracer studies continue to reveal high unemployment rates among vocational diploma graduates (Mohd Basir et al., 2022). This indicates the importance of examining non-technical predictors of employability, including self-beliefs, cognitive processes, and family influences.

One major determinant of employability is career self-efficacy. Derived from (Bandura, 1977, 1997; Bandura et al., 2006) social cognitive theory, career self-efficacy refers to individuals' beliefs in their capabilities to successfully perform career-related tasks such as decision-making, goal setting, and problem-solving (Xin et al., 2020). Research consistently shows that individuals with higher career self-efficacy demonstrate greater confidence in job-seeking, persistence in overcoming challenges, and proactive engagement in career development (Gerçek, 2024b; Urquijo et al., 2019; N. Wang et al., 2023). In contrast, low career self-efficacy is associated with indecision, avoidance of opportunities, and weaker employability outcomes (Amaral et al., 2023; Boo & Kim, 2020). In the context of vocational education, where students often face social stigma and limited pathways for further study, strengthening career self-efficacy is critical to ensuring smoother transitions into employment.

A related construct is dysfunctional career thoughts, which originate from the Cognitive Information Processing (CIP) approach to career development (Hayden et al., 2024). Dysfunctional thoughts refer to irrational or negative cognitions that interfere with effective career decision-making, such as excessive worry, lack of clarity, or pessimism about job prospects (Lee et al., 2022; Müceldili et al., 2023). These maladaptive patterns often lead to confusion, reduced motivation, and disengagement from career-related activities (Xu & Flores, 2023). For students, particularly those in transitional stages like vocational diploma holders, dysfunctional career thoughts may undermine employability by discouraging job applications, limiting confidence in interviews, and fostering withdrawal from career planning. Empirical studies indicate that reducing dysfunctional thoughts through counseling or cognitive restructuring significantly enhances career readiness and employability (Otu & Omeje, 2021).

In addition to cognitive and psychological factors, parental career behavior plays a pivotal role in shaping students' employability outcomes. Family socialization theories suggest that parents provide critical resources such as guidance, encouragement, and role modeling in their children's career development (Garcia et al., 2019). Supportive parental involvement is associated with greater career clarity, motivation, and exploration among students (Jiang et al., 2022). Conversely, overly controlling or disengaged parental behaviors may hinder career autonomy, reduce self-confidence, and foster confusion (Wen et al., 2023). In the Malaysian context, where collectivist cultural values emphasize family influence in major life decisions, parental career behavior may exert a stronger impact on employability outcomes than in more individualistic societies (Parola & Marcionetti, 2022). Yet, empirical studies linking parental behavior with employability skills among vocational diploma students remain limited.

Synthesizing these strands of literature suggests that employability is shaped by an interplay of individual self-beliefs (career self-efficacy), cognitive processes (dysfunctional career thoughts), and social influences (parental career behavior). However, much of the existing research has examined these factors in isolation, focusing primarily on university students or general higher education populations (Knight et al., 2021). Studies that integrate these constructs in the context of vocational diploma graduates are scarce, despite the evidence that this group experiences higher unemployment rates and lower confidence levels compared to other HEI graduates. This gap indicates the need for comprehensive models that

capture both psychological and social dimensions of employability among vocational students.

Therefore, this study builds on the theoretical foundations of Social Cognitive Career Theory (SCCT), Cognitive Information Processing (CIP) theory, and family socialization frameworks to explore the combined influence of career self-efficacy, dysfunctional career thoughts, and parental career behavior on employability skills. By situating these variables within the Malaysian vocational education context, the study not only extends the literature on employability but also provides practical insights for policymakers, educators, and families to enhance the career readiness of vocational graduates.

Conceptual Framework

The conceptual framework links three independent variables; namely career self-efficacy, dysfunction career thoughts and parental career behavior with the dependent variable; namely the employability skills of vocational college diploma students. In addition, this study also takes into account demographic factors, namely socioeconomic status and parental education level, which have the potential to influence the relationship between the independent and dependent variables.

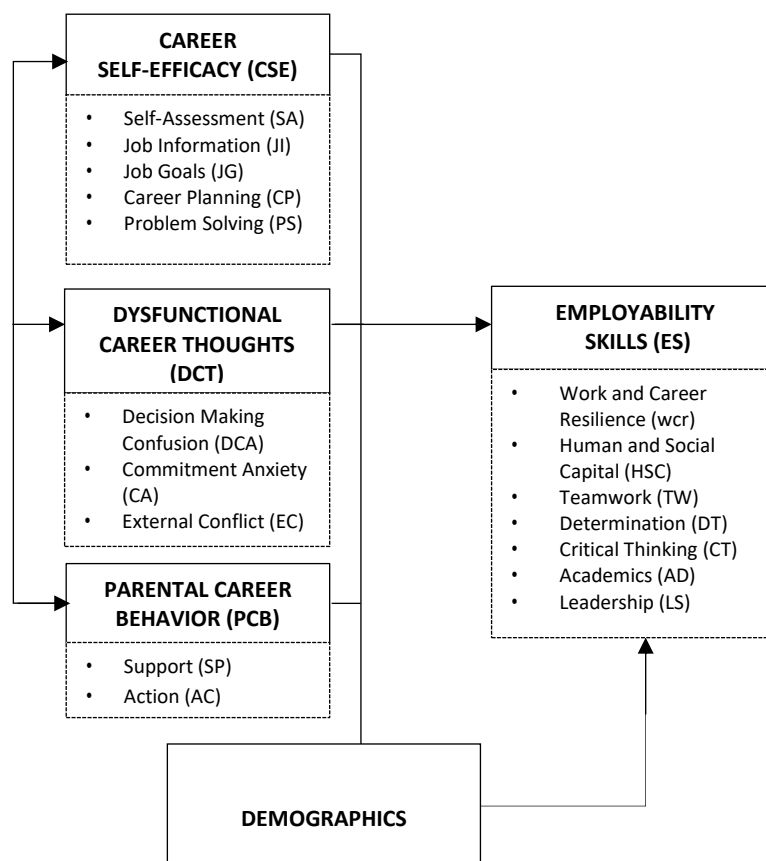


Figure 1. The conceptual framework

Discussion

The findings of this study highlight that employability skills among Malaysian vocational diploma students are not solely determined by technical training but are deeply shaped by a combination of psychological, cognitive, and social factors. This aligns with the

multidimensional conceptualization of employability proposed by Römgers et al. (2020), who emphasized that employability is a dynamic construct encompassing individual attributes, social resources, and contextual enablers.

First, Career Self-Efficacy (CSE) emerged as a significant positive predictor of employability skills. This is consistent with Social Cognitive Career Theory (SCCT) (Bandura, 1997; Lent et al., 1994), which posits that self-beliefs directly influence career planning, persistence, and adaptability. Prior studies have similarly found that students with higher levels of CSE are more proactive in job searching, demonstrate greater career adaptability, and exhibit higher employability outcomes (Gerçek, 2024; Kleine et al., 2023). In the Malaysian vocational context, this suggests that interventions to strengthen students' confidence through experiential learning, internships, or career mentoring may enhance their career readiness.

Second, the role of Dysfunctional Career Thoughts (DCT) reinforces the importance of cognitive dimensions in shaping employability. The negative association between irrational beliefs (e.g., decision-making confusion, commitment anxiety) and employability skills is in line with Cognitive Information Processing (CIP) theory (Sampson et al., 2004; Hayden et al., 2021). Similar to findings by Otu & Omeje (2021), this study confirms that dysfunctional thoughts can hinder career exploration, decision-making, and ultimately, employability. Addressing this requires integrating career counseling and cognitive-behavioral strategies into vocational curricula to restructure maladaptive beliefs and promote resilience.

Third, Parental Career Behavior (PCB) was also found to significantly influence employability skills. This aligns with family socialization frameworks (Garcia et al., 2019; Liang et al., 2020), which underscore the transmission of career values, aspirations, and adaptability through parental guidance. In collectivist societies like Malaysia, parental involvement often plays a dual role: supportive behaviors enhance motivation and clarity, while controlling or misaligned guidance may constrain autonomy (Parola & Marcionetti, 2022; Wen et al., 2023). This study extends these insights by showing that balanced parental support positively contributes to the employability of vocational diploma students, particularly in contexts where social capital and familial expectations are highly valued.

From a conceptual standpoint, this study contributes by integrating SCCT, CIP, and family socialization perspectives into a holistic employability framework. While previous research has tended to examine these constructs in isolation focusing either on self-efficacy (Arghode et al., 2021), cognitive barriers (Müceldili et al., 2023), or parental influence (Jackson & Lambert, 2025) this paper demonstrates the importance of considering their combined effects. The predictive framework developed here thus bridges psychological, cognitive, and social dimensions, offering a more comprehensive understanding of employability development in vocational education.

In comparison with earlier studies, the findings resonate with global evidence that TVET systems face persistent employability challenges due to a mismatch between technical training and labor market needs (Hondonga et al., 2021; Ibrahim & Mat Nashir, 2022). However, by situating the problem within Malaysia's vocational diploma context, this study underscores the added complexity of psychosocial barriers low confidence, dysfunctional

beliefs, and family dynamics that go beyond skill acquisition. This suggests that improving employability outcomes requires not only curricular reform but also the design of holistic interventions addressing students' psychological health, career beliefs, and family engagement.

Finally, the implications extend to policy and practice. For policymakers, the study indicates that initiatives under the Malaysia Education Blueprint and TVET reforms must integrate psychosocial dimensions alongside technical competencies. For educators, embedding career counseling, mentorship, and parental engagement programs into vocational training may be critical to producing graduates who are both technically competent and psychologically resilient. For families, the findings highlight the need for balanced involvement encouraging autonomy while providing support to foster student confidence and employability.

Implication

The findings of this study have several theoretical, practical, and policy implications that can guide future research and interventions to enhance employability outcomes among vocational diploma students.

This study contributes to the expansion of employability research by integrating Social Cognitive Career Theory (SCCT), Cognitive Information Processing (CIP) theory, and family socialization frameworks into a single predictive model. While prior studies have examined career self-efficacy (Gerçek, 2024; Kleine et al., 2023), dysfunctional career thoughts (Otu & Omeje, 2021; Hayden et al., 2024), or parental influence (Garcia et al., 2019; Parola & Marcionetti, 2022) separately, this study demonstrates their interdependent effects on employability skills. The conceptual framework developed here therefore provides a holistic lens for understanding employability in vocational education contexts, especially in collectivist societies like Malaysia.

The results emphasize that enhancing employability cannot rely solely on technical training. Vocational colleges should:

- a. Incorporate career counseling modules to strengthen students' confidence and self-efficacy.
- b. Apply cognitive restructuring interventions to reduce dysfunctional beliefs and improve decision-making.
- c. Design family engagement programs to align parental guidance with students' career goals.
- d. By embedding these elements into curricula, vocational institutions can cultivate graduates who are not only technically skilled but also psychologically resilient and socially supported.

For policymakers, the findings highlight the need to reframe Malaysia's TVET policies by integrating psychosocial dimensions into employability agendas. Programs under the Malaysia Education Blueprint and the Twelfth Malaysia Plan should extend beyond competency-based training to include interventions that enhance career adaptability, resilience, and parental involvement. Moreover, industry partnerships should be expanded to provide vocational students with real-world exposure, internships, and mentorship opportunities that reinforce career self-efficacy and reduce transition anxieties.

At the societal level, improving the employability of vocational diploma graduates has implications for youth unemployment reduction, economic productivity, and social equity. When graduates develop confidence, overcome cognitive barriers, and receive constructive parental support, they are better positioned to secure meaningful employment. This not only improves individual well-being but also strengthens Malaysia's labor force in the face of evolving industry demands.

Conclusion

This study provides strong evidence that the employability of vocational diploma students in Malaysia is not solely determined by technical competencies but also by the interplay of psychological, cognitive, and social factors. Career Self-Efficacy emerged as the strongest predictor of employability skills, highlighting the importance of confidence and self-belief in enabling students to plan careers, make informed decisions, and adapt to labor market demands. Conversely, Dysfunctional Career Thoughts significantly hindered employability, underscoring the need to address negative cognitive patterns through counseling and targeted interventions. Parental Career Behavior was also found to play an important role, reflecting the cultural significance of family support in Malaysia.

Taken together, the findings suggest that improving employability requires a holistic approach that integrates technical training with psychological empowerment, cognitive development, and constructive family involvement. For educators, this means embedding employability-focused training into curricula and expanding access to career counseling. For parents, it emphasizes the importance of balanced guidance that builds student confidence while encouraging autonomy. For policymakers, it calls for aligning vocational education with evolving industry needs while addressing the psychosocial barriers that hinder labor market entry. Ultimately, strengthening employability among vocational diploma graduates will not only enhance individual career outcomes but also contribute to Malaysia's broader socio-economic development by reducing youth unemployment, mitigating skill mismatches, and preparing a resilient workforce for the future.

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