

SELF-EFFICACY ACROSS DEMOGRAPHICS: THE ROLE OF CAREER SEEKING BEHAVIOR IN MALAYSIAN UNDERGRADUATES

AUTOEFICÁCIA EM DIFERENTES GRUPOS DEMOGRÁFICOS: O PAPEL DO COMPORTAMENTO DE BUSCA DE CARREIRA EM ESTUDANTES UNIVERSITÁRIOS DA MALÁSIA

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Mohd Izwan Mahmud*

*Universiti Kebangsaan Malaysia, Selangor, Malaysia

Orcid: <https://orcid.org/0000-0002-7874-0274>
izwan@ukm.edu.my

Salleh Amat*

*Universiti Kebangsaan Malaysia, Selangor, Malaysia

Orcid: <https://orcid.org/0000-0002-5687-3041>
sallehba@ukm.edu.my

Roslee Ahmad**

**Universiti Sains Islam Malaysia, Negeri Sembilan, Malaysia

Orcid: <https://orcid.org/0000-0001-6980-9084>
roslee@edu.usim.my

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Abstract

Background: The preparations involved in planning, choosing, and making career decisions are explained by university students' career readiness. The purpose of this study is to determine undergraduate students' profiles of career readiness. In addition to measuring the differences in career self-efficacy among fields of study, gender and career seeking behavior **Methods:** This study uses cross-sectional survey design to determine the career readiness patterns of students. A total of 410 undergraduate students based on cluster division, namely sciences (n = 174), and social sciences (n = 236), were involved as the study sample. The instrument used is the Career Decision Self-efficacy – Short Form (CDSE-SF). Data were analyzed descriptively and using t-tests. **Result:** According to the study's findings, career self-efficacy is moderate (42.9%), and high (57.1%). Furthermore, there was no significant difference between Sciences and Social Sciences students according to the independent t-test analysis, $t(408) = 1.87, p = .072$, for all subscales except for the Goal Selection subscale, which showed a significant difference $t(313) = 2.71, p = .007$. However, revealed no gender difference $t(408) = 0.45, p = .650$. **Conclusion:** The study underscores a notable gap in career self-efficacy among undergraduates, revealing only moderate confidence in career decision-making. The lack

Resumo

Contexto: Os preparativos envolvidos no planejamento, escolha e tomada de decisões de carreira são explicados pela preparação profissional dos estudantes universitários. O objetivo deste estudo é determinar os perfis de preparação profissional dos estudantes de graduação. Além de medir as diferenças na autoeficácia profissional entre áreas de estudo, gênero e comportamento de busca de carreira **Métodos:** Este estudo utiliza um desenho de pesquisa transversal para determinar os padrões de preparação profissional dos estudantes. Um total de 410 estudantes de graduação, com base na divisão em grupos, nomeadamente ciências (n = 174) e ciências sociais (n = 236), participaram como amostra do estudo. O instrumento utilizado é o Career Decision Self-efficacy – Short Form (CDSE-SF). Os dados foram analisados descritivamente e utilizando testes t. **Resultado:** De acordo com os resultados do estudo, a autoeficácia profissional é moderada (42,9%) e alta (57,1%). Além disso, não houve diferença significativa entre os alunos de Ciências e Ciências Sociais de acordo com a análise do teste t independente, $t(408) = 1,87, p = 0,072$, para todas as subescalas, exceto para a subescala Seleção de Metas, que mostrou uma diferença significativa $t(313) = 2,71, p = 0,007$. No entanto, não revelou diferença de gênero $t(408) = 0,45, p = 0,650$. **Conclusão:** O estudo



of differences across gender and fields of study points to systemic shortcomings in higher education's career readiness initiatives. These findings highlight the need for structured, experiential, and evidence-based career development programs to strengthen both students' skills and self-belief, ensuring they are better prepared for the workforce. Future research should examine intervention-based and longitudinal approaches to evaluate the effectiveness of such programs over time.

Keywords: Career Readiness. Career Self-Efficacy. Career Development. University Students.

destaca uma lacuna notável na autoeficácia profissional entre os estudantes de graduação, revelando apenas uma confiança moderada na tomada de decisões profissionais. A ausência de diferenças entre gêneros e áreas de estudo aponta para deficiências sistêmicas nas iniciativas de preparação profissional do ensino superior. Essas descobertas destacam a necessidade de programas de desenvolvimento de carreira estruturados, experienciais e baseados em evidências para fortalecer as habilidades e a autoconfiança dos alunos, garantindo que eles estejam mais bem preparados para o mercado de trabalho. Pesquisas futuras devem examinar abordagens baseadas em intervenções e longitudinais para avaliar a eficácia de tais programas ao longo do tempo.

Palavras-chave: Preparação para a Carreira. Autoeficácia Profissional. Desenvolvimento de Carreira. Estudantes Universitário.

1 INTRODUCTION

University students' career development in the twenty-first century places a strong emphasis on technological capabilities in order to equip graduates with the knowledge, talents, and skills needed to fulfill the demands of the labor market [1]–[3]. The labor market requires graduates to be proficient in their disciplines [4]–[6]. Additionally, the degree to which university graduates find work after graduation indicates how well they match market demands. National plans and objectives will be influenced by the ranking of universities that generate graduates that are competent and highly trained [7]. Given the existing circumstances, it has been recognized and verified that the graduates generated do not possess the knowledge and abilities needed by the labor market [5]. Universities and industry participants face a challenge in working together to develop answers to the problem of jobless graduates and job seekers [8].

Previous studies have shown that undergraduate students generally exhibit low to moderate levels of career readiness [20], [28]–[30]. Career readiness is critical because making informed vocational choices requires consideration of organizational, social, economic, and familial factors that influence career development [9], [10]. A student's

ability to engage in systematic career planning and exploration is therefore largely predicted by their level of career readiness.

Supporting this, recent evidence emphasizes that career self-efficacy is one of the strongest psychosocial predictors of career maturity [18]. Career self-efficacy not only enhances students' confidence in their ability to make career decisions but also guides proactive career behaviors such as goal-setting, information gathering, and skill development. Thus, strengthening students' career self-efficacy through targeted interventions and structured career development programs can improve their overall career readiness, enabling more informed decisions and better preparedness for the workforce.

Career readiness is measured based on an individual's ability to make career decisions that involve feelings, thoughts, attitudes, and expectation beliefs. The ability of a person to evaluate their own abilities to plan and carry out the planned course of action in order to accomplish their intended goals is another definition of career self-efficacy. It entails not just having career-related information and abilities but also having the capacity to decide what should be done depending on one's knowledge and abilities [11]. As a result, one factor that might gauge the degree of professional preparedness during the process of personal career development is career self-efficacy.

Social Cognitive Theory explains self-efficacy as a person's belief in their ability to plan and carry out the behavioural, social, and cognitive actions needed for success. This belief not only shapes persistence and strategy use but also fuels motivation and engagement [11], [21]. Consistent with Yang, Chen, and Wang, higher motivation and engagement then strengthen cognitive outcomes such as critical thinking showing how self-efficacy operates as a foundational driver of effective learning and performance. [41].

Conversely, to ascertain the degree of its influence on the career decision-making process, career self-efficacy is required [13], [14]. Dysfunctional career thinking is more common in people with low self-efficacy [23]. People with high self-efficacy are more likely to be confident in their ability to complete career responsibilities and to pursue career exploration. Conversely, low self-efficacy is linked to a propensity to shy away from work-related activities and a lack of confidence while making career decisions [13]. Because of this, people who have a high level of self-efficacy are able to make well-

informed job decisions, take responsibility for their actions, and complete career responsibilities with the help of the right programs and training. [14].

Specific objective of the study

- i. Identifying career readiness profiles among undergraduate students at public universities.
- ii. Examining the differences in career self-efficacy between academic fields and gender
- iii. Examining the differences in career self-efficacy between career seeking-behavior

2 MATERIALS AND METHODS

2.1 Research design

This study employed a quantitative approach using a combined descriptive and comparative research design. The descriptive component was used to determine the overall level and patterns of career readiness among students, while the comparative component examined differences in career self-efficacy across academic clusters, gender, and career-seeking behavior. This design enabled a comprehensive understanding of students' career readiness profiles and the identification of demographic and experiential factors associated with variations in self-efficacy.

2.2 Sample procedure

A total of 410 undergraduate students from a Malaysian public university participated in this study, comprising 227 females (55.4%) and 183 males (44.6%). Participants were selected using cluster sampling, where two academic clusters—Sciences (n = 174) and Social Sciences (n = 236)—were identified as the primary sampling units. Within each cluster, intact classes were approached to ensure practical access and adequate representation of students across different programs. The age range of participants was 19 to 24 years, reflecting typical enrolment from first- to final-year undergraduate cohorts.

The sample size was determined based on prior Malaysian studies on career self-efficacy that reported medium effect sizes for demographic comparisons. Using G*Power 3.1 for an independent samples t-test with a medium effect size ($d = 0.50$), $\alpha = .05$, and power of .80, a minimum of 128 students per group was required. The final sample exceeded these thresholds, providing sufficient statistical power for analysing differences by gender, academic cluster, and participation in career programs.

However, the sampling approach has limitations. Cluster sampling restricted participation to students from a single public university, which may limit generalisability to other institutional contexts. Because intact classes were used, certain subgroups may have been overrepresented or underrepresented relative to the overall student population. Additionally, participation was voluntary, introducing the possibility of self-selection bias, where students with higher academic engagement or career interest may have been more inclined to participate. These limitations should be considered when interpreting the findings.

2.3 Measure

The career self-efficacy variable is measured in this study using the Career Decision Self-Efficacy – Short Form (CDSE-SF) test [15]. The test tool known as the CDMSE was created by Betz, Klein, and Taylor in 1996 [15]. But in 2006, Betz and Taylor revised the CDMSE into the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) [12]. This questionnaire assesses sub-scales of self-efficacy, such as self-awareness, job information, decision goals, planning, and problem-solving, and it has 25 items that have been altered from the original 50 items [15]. The scoring of the CDSE-SF measurement tool uses a five-point Likert scale from (1) – Very Uncertain to (5) – Very Certain [12]. According to the mean score interpretations provided by Betz and Hackett [12], and Betz, Klein, and Taylor [15], Table 1 displays the mean score interpretation.

Table 1*Interpretation of CDSE-SF mean scores*

Mean Score	Interpretation
1.00 – 2.33	Low
2.34 – 3.66	Moderate
3.67 – 5.00	High

According to research findings on student study samples from a variety of ethnic groups in Australia and Africa. CDSE-SF has shown good validity stability. The Career Decision-Making Attitudes exam and CDSE-SF have a substantial positive connection ($r = .41$). according to Luzzo's validity test [26]. Students with strong CDSE-SF scores also exhibit high decision-making attitudes scores. Likewise. Chung's study on racial and gender disparities in graduate students' career commitment and self-efficacy confirms similar findings [27].

Taylor and Betz reported that the reliability obtained for the overall Alpha Cronbach score was .96. while values for the five subscales ranged from .86 to .89 [17]. Meanwhile. Zalizan Mohd Jelas et al. conducted a pilot study using a translated version and found an Alpha Cronbach value of 0.92 [20]. Similarly. Buyukgoze-Kavas found reliability scores of 0.92 (overall). problem-solving 0.68. planning 0.72. self-awareness 0.74. job information 0.61. and choice goals 0.81 [16]. The retest analysis conducted over two weeks revealed a stability coefficient of 0.91 [16].

Career behavior seeking refers to students' active engagement in career-related programs and activities. including exploring career information. participating in counseling sessions or workshops. attending career events. and seeking opportunities such as internships or job-shadowing to enhance their understanding of future career pathways.

Questionnaires were administered to participants after providing an explanation of the study's objectives. ensuring confidentiality. and obtaining informed consent. Participation was voluntary. and all procedures adhered to the ethical guidelines from institution.

2.4 Data analysis

Data were analyzed using IBM SPSS Statistics Version 25. Descriptive statistics (mean, standard deviation, percentage) were computed to determine the level of career self-efficacy. Independent samples t-tests were conducted to examine differences by gender, academic cluster, and career program participation.

3 RESULTS

The findings from the research are divided into two categories: The descriptive analysis results pertaining to the degree of career readiness comprise the first section. In the meantime, inferential analysis is used in the second section of the findings.

3.1 Career readiness profile based on study cluster

The distribution of responders per field of study is displayed in Table 2. A total of 410 students participated in the study. The majority were female students in the Social Sciences cluster (n = 124, 30.2%), followed by male students in the same cluster (n = 112, 27.3%). Female students in the Sciences cluster accounted for 103 participants (25.1%), while male students in the Sciences cluster made up 71 participants (17.3%).

Overall, more students were enrolled in Social Sciences (n = 236, 57.6%) than in Sciences (n = 174, 42.4%). Female students (n = 227, 55.4%) slightly outnumbered male students (n = 183, 44.6%) across both academic clusters.

Table 2

Distribution of respondents by field of study

Gender	Academic Cluster	Frequency	Percent (%)
Male	Social Sciences	112	27.3
	Sciences	71	17.3
Female	Social Sciences	124	30.2
	Sciences	103	25.1
Total		410	100.0

3.1.1 The level of career self-efficacy (CSE)

Table 3 reveals distinct patterns in students' career self-efficacy across six domains. Descriptive analysis of six career self-efficacy (CSE) subscales showed that students generally reported moderate to high levels of CSE ($M = 3.71$, $SD = 0.42$). Over half (57.1%) demonstrated high general CSE. For the subscales, self-appraisal averaged 3.57 ($SD = 0.48$) with most students at moderate levels (59.5%). Occupational information ($M = 3.81$, $SD = 0.50$) and goal selection ($M = 3.80$, $SD = 0.46$) showed higher levels, with 62% of students reporting high efficacy. Planning ($M = 3.74$, $SD = 0.51$) and problem-solving ($M = 3.63$, $SD = 0.50$) were mostly moderate to high. Overall, students displayed strong confidence in career-related abilities, particularly in occupational information and goal selection.

Table 3

Level of career self-efficacy

Categorize		CSE	SA	OI	GS	P	PS
Mean		3.71	3.57	3.81	3.80	3.74	3.63
SD		0.42	0.48	0.50	0.46	0.51	0.50
Level	Low	0	5%	0	0	0.2%	0.5%
	Moderate	42.9%	59.5%	38.0%	38.0%	46.6%	53.2%
	High	57.1%	40.0%	62.0%	62.0%	53.2%	46.3%

$n = 410$. Career self-efficacy = SCE. Self-Appraisal (SA). Occupational Information (OI). Goal Selection (GS). Planning (P). Problem Solving (PS)

3.2 Differences between fields of study for career self-efficacy

H₀₁. There is no significant difference between the clusters of Science and Social Science for the CSE and sub scales.

Levene's Test indicated unequal variances for several subscales; therefore, Welch's results were used for efficacy, self-appraisal, occupational information, and goal selection, while equal variances were assumed for planning and problem-solving.

An independent samples t-test was conducted to assess whether students from two academic clusters, Sciences and Social Sciences, differed significantly in their career decision-making self-efficacy across six subscales. The results showed a significant

difference in the 'Goal Selection' subscale. where students from Social Sciences scored significantly higher than those from Sciences. $t(408) = 1.87$. $p = .072$. For the remaining subscales. including Overall Career Self-Efficacy ($p = .072$). Self-Appraisal ($p = .159$). Occupational Information ($p = .058$). Planning ($p = .151$). and Problem Solving ($p = .629$). no significant differences were found. However. significant difference in Goal Selection (GS) scores between the two groups. Group 1 ($M = 3.86$. $SD = 0.40$) reported higher GS compared to Group 2 ($M = 3.73$. $SD = 0.52$). Meal The t-test result. $t(313) = 2.71$. $p = .007$. These findings suggest that academic cluster has limited influence on students' career self-efficacy. with the exception of goal-setting abilities.

Table 4

Independent Samples t-Test for Academic Cluster Differences Across Career Self-Efficacy Subscales

Variable	Social Sciences M (SD)	Sciences M (SD)	t(df)	p
Career self-efficacy (CSE)	3.75 (0.38)	3.67 (0.48)	1.87 (408)	.072
Self-appraisal (SA)	3.60 (0.43)	3.53 (0.54)	1.41 (321)	.159
Occupational information (OI)	3.85 (0.47)	3.75 (0.54)	1.90 (340)	.058
Goal selection (GS)	3.86 (0.40)	3.73 (0.52)	2.71 (313)	.007*
Planning (P)	3.78 (0.51)	3.70 (0.53)	1.44 (364)	.151
Problem solving (PS)	3.65 (0.46)	3.62 (0.55)	0.48 (336)	.629

* $p < .05$

Career self-efficacy = SCE. Self-Appraisal (SA). Occupational Information (OI). Goal Selection (GS). Planning (P). Problem Solving (PS)

3.3 Differences between genders in students' career self-efficacy

Ho2. The Career Self-Efficacy measure has no significant differences between genders.

An independent samples t-test was conducted to examine whether there were significant differences in career self-efficacy scores between male and female students across six subscales (Table 5). The results indicated no significant gender differences for any of the Overall self-efficacy: $t(408) = 0.45$. $p = .650$ and all subscales Self-appraisal: $t(408) = 0.45$. $p = .656$; Occupational information: $t(408) = -0.88$. $p = .378$; Goal

selection: $t(408) = 1.06$, $p = .292$; Planning: $t(408) = 0.84$, $p = .403$. and Problem solving: $t(408) = 0.55$, $p = .580$. As a result, H_0 was not rejected.

In all cases, the p -values were greater than the standard alpha level of .05, indicating no statistically significant differences between male and female students. These findings suggest that gender does not significantly influence students' self-efficacy in making career decisions across the measured domains.

Table 5

Independent Samples t-Test for Gender Differences Across Career Self-Efficacy Subscales

Variable	Male M (SD)	Female M (SD)	t(df)	p
Career self-efficacy (CSE)	3.72 (0.42)	3.70 (0.43)	0.45 (408)	.650
Self-appraisal (SA)	3.58 (0.48)	3.56 (0.49)	0.45 (408)	.656
Occupational information (OI)	3.79 (0.50)	3.83 (0.51)	-0.88 (408)	.378
Goal selection (GS)	3.83 (0.47)	3.78 (0.46)	1.06 (408)	.292
Planning (P)	3.77 (0.49)	3.73 (0.54)	0.84 (408)	.403
Problem solving (PS)	3.65 (0.51)	3.62 (0.49)	0.55 (408)	.580

$p < .05$

Career self-efficacy = SCE. Self-Appraisal (SA). Occupational Information (OI). Goal Selection (GS). Planning (P). Problem Solving (PS)

3.4 Differences between career seeking behavior in students' career self-efficacy

H_0 3. The Career Self-Efficacy measure has no significant differences between career seeking behaviour

An independent samples t -test was conducted to compare the self-efficacy scores between respondents who had participated and had not participated in career programs across six domains career self-efficacy, self-appraisal, occupational information, goal selection, planning, and problem-solving. The results indicated a statistically significant difference, $t(119.51) = 4.19$, $p < .001$. Participants who had participated in career programs ($M = 3.76$, $SD = 0.41$) reported higher self-efficacy than those who had not ($M = 3.53$, $SD = 0.44$). The result also significantly for all sub scales, self-appraisal $t(119.70) = 3.74$, $p < .001$; occupational information $t(127.43) = 4.07$, $p < .001$; goal selection $t(117.09) = 3.05$, $p = .003$; planning $t(122.03) = 4.47$, $p < .001$; problem solving $t(118.29) = 2.86$, $p = .005$. Overall, respondents who had participated in career-related programs

reported significantly higher self-efficacy in all six measured domains compared to those who had not participated (Table 6).

Table 6

Independent Samples t-Test for Career Seeking-Behavior Across Career Self-Efficacy Subscales

Variable	Group	N	Mean	SD	t(df)	p
Career self-efficacy (CSE)	Participated	327	3.76	0.41	4.19 (119.51)	<.001
	Not Participated	82	3.53	0.44		
Self-appraisal (SA)	Participated	327	3.62	0.47	3.74 (119.70)	<.001
	Not Participated	82	3.39	0.50		
Occupational information (OI)	Participated	327	3.86	0.50	4.07 (127.43)	<.001
	Not Participated	82	3.61	0.48		
Goal selection (GS)	Participated	327	3.84	0.45	3.05 (117.09)	.003
	Not Participated	82	3.66	0.49		
Planning (P)	Participated	327	3.80	0.50	4.47 (122.03)	<.001
	Not Participated	82	3.52	0.52		
Problem solving (PS)	Participated	327	3.67	0.49	2.86 (118.29)	.005
	Not Participated	82	3.49	0.53		

$p < .05$

Career self-efficacy = SCE. Self-Appraisal (SA). Occupational Information (OI). Goal Selection (GS). Planning (P). Problem Solving (PS)

4 DISCUSSION AND IMPLICATIONS

The findings indicate that students' career readiness levels range from moderate to high, with Occupational Information and Goal Selection showing the strongest performance. However, the substantial proportion of students at moderate levels for Self-Career Exploration and Self-Appraisal suggests that self-awareness and personal exploration remain underdeveloped. Similarly, the moderate levels observed in Planning and Problem Solving highlight the need to strengthen practical career management skills. Overall, while students demonstrate a solid foundation of career readiness, additional targeted interventions are needed to enhance self-reflection, planning, and decision-making abilities. These findings are consistent with the Graduate Tracer Studies for 2016 and 2017 [6], which reported employability rates of 62.5%–63.0%, highlighting the persistent gap in workforce readiness among Malaysian graduates.

According to Self-Efficacy Theory [22], an individual's belief in their ability to execute specific tasks significantly influences motivation, behavioral choices, and

perseverance in the face of challenges. In the career context, Betz and Hackett's [12] Career Decision Self-Efficacy (CDSE) framework has been widely applied to explain how confidence in career decision-making is integral to intentional career planning. Similar trends have been reported globally, where low self-efficacy is associated with indecision, avoidance, and weaker career exploration behaviors [13], [14], [23].

Weaknesses in self-efficacy, particularly among first-year students, have been linked to unclear or inconsistent career goals [18], [19], with recent studies in Malaysia confirming that targeted interventions—such as psychoeducational workshops, soft skills training, and mentorship programs—significantly improve CDSE scores [19], [36]. Komarraju et al. [13] similarly note that high career anxiety and uncertainty correlate with lower self-efficacy, whereas structured support can mitigate these effects.

In the present study, no significant differences in overall career self-efficacy were found between sciences and social sciences, except for the goal selection domain, where social science students scored higher. This partially contrasts with earlier findings by Mahmud [34], who reported consistently higher self-efficacy among social sciences students, possibly reflecting differences in pedagogical emphasis on reflection, goal-setting, and career awareness. Such disciplinary differences are echoed in prior work showing that exposure to reflective practices and applied problem-solving tasks is associated with stronger CDSE outcomes [31], [36].

The analysis showed no significant gender differences in overall career self-efficacy or any of the six subscales, indicating that male and female students exhibit comparable confidence in key areas of career decision-making. This suggests that gender does not meaningfully influence students' perceived abilities in self-appraisal, accessing occupational information, setting goals, planning, or solving career-related problems. The findings may reflect increasingly equal access to career guidance and resources across genders. Gender-based analyses revealed no significant differences, suggesting that self-efficacy in career decision-making is shaped more by learning experiences, social support, and environmental factors than by gender per se [21], [23], [27]. This aligns with findings from Lent et al. [35], which emphasize that self-efficacy is a modifiable construct responsive to interventions rather than an inherent demographic trait. The absence of gender differences likely reflects Malaysia's increasingly equitable access to career guidance and university support systems, where male and female students receive

comparable exposure to resources and career-building opportunities. In a collectivist educational culture shaped by family encouragement and peer support, students' career self-efficacy appears to be driven more by shared learning experiences than by gender norms. This supports the view that self-efficacy is shaped by environmental inputs rather than inherent demographic traits.

The majority of students (327 out of 409) participated in career programs and reported higher scores in overall career self-efficacy and all subscales compared to non-participants. This suggests that involvement in career activities may enhance confidence in self-appraisal, goal setting, planning, and problem-solving. The findings highlight the benefits of career programs in supporting students' career development and suggest that expanding access could further improve career readiness for all students. A notable outcome of this study was that students participating in career programs scored significantly higher across all CDSE domains: self-appraisal, occupational information, goal selection, planning, and problem-solving than their non-participating peers. This is in line with Social Cognitive Career Theory (SCCT) [35], which positions self-efficacy as a critical determinant of proactive career behaviors, including networking, résumé preparation, and job applications [36]. Prior research confirms that experiential learning and guided exposure to career planning tools positively influence career adaptability and confidence [19], [37]. Students who participated in career programs showed significantly higher scores across all CDSE domains than those who did not. This supports SCCT, which identifies self-efficacy as a key driver of proactive career behaviors. Prior evidence shows that structured career interventions strengthen confidence and adaptability, and Liu and Wang [38] similarly demonstrate that guided, tool-based learning such as AI-supported instruction enhances learners' cognitive engagement and self-efficacy, reinforcing the value of structured support in career development.

However, participation in such programs is not universal. Studies have identified multiple barriers to engagement, including underestimation of program benefits [37], lack of clear career goals and structural constraints such as limited time or scheduling conflicts [39]. Moreover, first-generation and marginalized students who often rely heavily on institutional career support are disproportionately affected when such barriers remain unaddressed [40].

From a practical perspective, the CDSE-SF can serve as a diagnostic instrument for university career counselors to: (i) assess students' baseline career self-efficacy; (ii) develop individualized career profiles; (iii) tailor intervention strategies; and (iv) evaluate intervention effectiveness over time. Strategic institutional initiatives, such as a centralized digital career profiling system, could integrate self-efficacy data with student development plans, supporting a more holistic approach to employability enhancement.

Future research should expand the sample to include multiple Malaysian public universities and diverse academic fields, enabling a more comprehensive understanding of national career readiness patterns. Such evidence can inform policy and program design to address persistent gaps in graduate employability [6], [36].

5 CONCLUSION

This study highlights an important yet often overlooked concern in higher education, while a majority of undergraduates exhibit high levels of career self-efficacy, a substantial proportion over one-third still report only moderate confidence, particularly in the domains of self-appraisal and problem-solving. These two areas are critical components of effective career decision-making, and weaknesses here may hinder students' ability to navigate increasingly complex and dynamic career landscapes.

Notably, the absence of significant gender differences, and the limited variation across academic fields (with only goal selection differing), suggests that the challenges related to career preparedness are systemic rather than isolated to specific groups. This points to a universal gap in how institutions equip students with the psychological resources necessary for career decision-making.

The most compelling finding lies in the consistent association between participation in career-related programs and higher self-efficacy across all domains. This reinforces the value of experiential, guided, and developmental career interventions in fostering not just career knowledge, but the self-belief required for students to apply that knowledge effectively. The implication is clear: students who are not engaged in structured career development opportunities are at a disadvantage.

Therefore, universities must not only offer such programs but proactively ensure accessibility and encourage participation especially among students who may be unaware

of their own career readiness limitations. Institutional strategies should aim for systemic integration of career development within the academic experience, rather than treating it as supplementary or optional.

In conclusion, strengthening undergraduate career self-efficacy demands an inclusive, evidence-informed approach that prioritizes psychological readiness alongside academic achievement. By addressing this gap, institutions can better prepare students for workforce entry, long-term adaptability, and meaningful career development in an ever-evolving global job market.

LIMITATIONS

This study's cross-sectional design and reliance on self-reported data limit causal inference and may introduce response bias. The sample, drawn from a single public university, constrains generalizability, while the CDSE-SF assesses perceived rather than actual competencies. Additionally, factors such as socioeconomic background and prior work experience were not controlled. Future research should adopt more diverse samples and employ longitudinal or mixed-methods designs, incorporating both quantitative and qualitative approaches, to better capture changes in career self-efficacy and provide a comprehensive understanding of career readiness.

AVAILABILITY OF DATA AND MATERIALS

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

LIST OF ABBREVIATIONS

CSE : Career Self-Efficacy

CDSE-SF: Career Decision Self-Efficacy – Short Form

SA: Self-Appraisal

OI: Occupational Information

GS: Goal Selection

P: Planning

PS: Problem Solving

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study received ethical approval from the Universiti Kebangsaan Malaysia. Prior to participation, all respondents were informed about the purpose of the study, assured of the confidentiality and anonymity of their responses, and informed that their participation was voluntary. Informed consent was obtained from all participants through a consent statement provided at the beginning of the questionnaire.

HUMAN AND ANIMAL RIGHTS

All procedures performed in studies involving human participants were in accordance with the ethical standards Personal Data Protection Act 2010 (PDPA) [Act 709].

CONSENT FOR PUBLICATION

The participants were provided with a consent form detailing the study's objectives, confidentiality measures, privacy assurances regarding their information, and their rights within the study, including the option to withdraw consent and participation at any point.

STANDARDS OF REPORTING

STROBE guidelines were followed.

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AUTHORS' CONTRIBUTION

The authors confirm their contribution to the paper as follows: M.I.M.: Draft Manuscript. Analysis and interpretation of results; S.A.: Draft manuscript. Editing/reviewing. R.A.: Editing/reviewing. All authors reviewed the results and approved the final version of the manuscript.

REFERENCES

- A. Bandura. *Self-Efficacy: The Exercise of Control*. New York: Freeman. 1997.
- A. Buyukgoze-Kavas. "A psychometric evaluation of the Career Decision Self-Efficacy Scale—Short Form with Turkish university students." *Journal of Career Assessment*. vol. 21. no. 4. pp. 1–15. 2013.
- A. Hirschi. S. G. Niles. and P. Akos. "Engagement in adolescent career preparation: Social support, personality, and the development of choice decidedness and congruence." *J. Adolesc.*, vol. 34. no. 1. pp. 173–182. 2011. doi: 10.1016/j.adolescence.2009.12.009.
- Adeyemo. D. A.. & Jegede. D. J. *Sociopsychological determinants of career maturity among secondary school students in Osogbo, Osun State, Nigeria*. *Journal of Psychological Perspective*. 5(1). 9-16. 2023. <https://doi.org/10.47679/jopp.514992023>
- B. Wei and C. P. Phee. "Investigating Career Decision Self-Efficacy, Internship Efficacy, and Career Readiness among Undergraduate Students: A Review." *Int. J. Basic Appl. Res.*, 2025.
- D. A. Luzzo. "A psychometric evaluation of the career decision-making self-efficacy scale." *Journal of Counseling & Development*. vol. 74. no. 3. pp. 276–279. 1996.
- D. L. Blustein. M. E. Kenny. A. Di Fabio. and J. Guichard. "Expanding the impact of the psychology of working: Engaging psychology in the struggle for decent work and

- human rights." *J. Career Assess.*, vol. 27, no. 1, pp. 3–28, 2019. doi: 10.1177/1069072718774002.
- D. Sidiropoulou-Dimakakou et al.. "Career decision-making difficulties, dysfunctional thinking and generalized self-efficacy of university students in Greece." *World Journal of Education*, vol. 2, no. 1, pp. 117–130, 2012.
- G. V. Gushue, K. R. L. Scanlan, K. M. Pantzer, and C. P. Clarke. "The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in African American high school students." *J. Career Dev.*, vol. 33, no. 1, pp. 19–28, 2006. doi: 10.1177/0894845305283004.
- I. Yussof, I. Rahmah, and R. Sidin. "Graduan dan Alam Pekerjaan: Kes Siswazah UKM." *Akademika*, vol. 72, pp. 3–24, Jan. 2008.
- J. O. Park and H. Kim. "The relationship between career decision-making self-efficacy, career preparation behavior and career decision difficulties among South Korean college students." **Sustainability**, vol. 14, no. 21, Art. 14384, Nov. 2022.
- J. P. Gaudron. "A psychometric evaluation of the Career Decision Self-Efficacy Scale Short-Form among French university students." *Journal of Career Assessment*, vol. 19, no. 4, pp. 420–430, 2011.
- J. P. Sampson et al.. "Variables affecting readiness to benefit from career interventions." *The Career Development Quarterly*, vol. 61, no. 2, pp. 98–109, 2013.
- J. Tan, J. Li, and X. Yi. "How Can General Self-Efficacy Facilitate Undergraduates' Employability? A Multiple Mediation Model." *Behav. Sci.*, vol. 15, no. 4, Art. 514, Apr. 2025.
- K. J. Yon, J.-R. Joeng, and M. Goh. "A longitudinal study of career maturity of Korean adolescents: The effects of personal and contextual factors." *Asia Pacific Education Review*, vol. 13, no. 4, pp. 727–739, 2012.
- L. M. Andrews et al.. "Can perfectionism affect career development? Exploring career thoughts and self-efficacy." *Journal of Counseling & Development*, vol. 92, no. 3, pp. 270–279, 2014.
- L. M. Jome and S. D. Philips. "Interventions to aid job finding and choice implementation." in *Career Development and Counseling*, 2nd ed., S. D. Brown and R. W. Lent, Eds. Hoboken, NJ: John Wiley & Sons, 2013, pp. 1–25.
- Liu, W., & Wang, Y. *The effects of using AI tools on critical thinking in English literature classes among EFL learners: An intervention study*. *European Journal of Education*, 12804, 2024.
- M. H. Ismail. "Study on Employability of Graduates in Malaysia: A Survey of Employer Perspectives." *Prosiding PERKEM VII*, vol. 2, pp. 906–913, 2012.

- M. I. Mahmud et al.. "Career self-efficacy among undergraduate students in a public university." *Akademika*. vol. 90. pp. 167–175. 2020.
- M. I. Mahmud et al.. "Effectiveness of job readiness course on career self-efficacy between two groups of undergraduates." *PalArch's Journal of Archaeology of Egypt / Egyptology*. vol. 17. no. 3. pp. 314–322. 2020.
- M. I. Mahmud. "Career self-efficacy profiles among undergraduate students: A comparative study." *Journal of Education and Practice*. vol. 8. no. 1. pp. 1–10. 2017.
- M. Komarraju. J. Swanson. and D. Nadler. "Increased career self-efficacy predicts college students' motivation. and course and major satisfaction." *Journal of Career Assessment*. vol. 22. no. 3. pp. 420–432. 2013.
- M. S. Zainal. H. M. Low Low. and H. N. Ismail. "The Relationship of Learning Experience and Career Self-Efficacy Among Undergraduate Students from a Public University in Malaysia." *J. Educ.*. vol. 49. no. 1 (Special Issue). Dec. 2024.
- N. E. Betz and G. Hackett. "Career self-efficacy theory: Back to the future." *Journal of Career Assessment*. vol. 14. no. 1. pp. 3–11. 2006.
- N. E. Betz. K. L. Klein. and K. M. Taylor. "Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale." *Journal of Career Assessment*. vol. 4. no. 1. pp. 47–57. 1996.
- National Higher Education Research Institute (IPPTN). *Laporan Akhir Kajian Masalah Pengangguran di Kalangan Graduan*. Pulau Pinang: IPPTN. 2003.
- O. Mohamed. *Kaunseling Perkembangan Kerjaya Abad ke-21*. Serdang Selangor: Universiti Putra Malaysia. 2016.
- R. C. Reardon. J. G. Lenz. J. P. Sampson. and G. W. Peterson. *Career Development and Planning: A Comprehensive Approach*. 4th ed. Dubuque. IA: Kendall Hunt. 2012.
- R. W. Lent. S. D. Brown. and G. Hackett. "Toward a unifying social cognitive theory of career and academic interest. choice. and performance." *Journal of Vocational Behavior*. vol. 45. no. 1. pp. 79–122. 1994.
- R. W. Lent. S. D. Brown. and G. Hackett. "Toward a unifying social cognitive theory of career and academic interest. choice. and performance." *J. Vocat. Behav.*. vol. 45. no. 1. pp. 79–122. 1994. doi: 10.1006/jvbe.1994.1027.
- S. D. Brown and R. W. Lent. *Career development and counseling: Putting theory and research to work*. 3rd ed. Hoboken. NJ. USA: John Wiley & Sons. 2019.
- S. L. D. Restubog. A. R. Florentino. and P. R. J. M. Garcia. "The mediating roles of career self-efficacy and career decidedness in the relationship between contextual support and persistence." *Journal of Vocational Behavior*. vol. 77. no. 2. pp. 186–195. 2010.

- S. O. Salami. "Gender, identity status and career maturity of adolescents in Southwest Nigeria." *Journal of Social Science*. vol. 16. no. 1. pp. 35–49. 2008.
- T.-E. Dybwad. "Career maturity: A latent means and covariance structure analysis of Daidalos." *Scandinavian Journal of Psychology*. vol. 50. no. 2. pp. 109–120. 2009.
- Y. B. Chung. "Career decision-making self-efficacy and career commitment: Gender and ethnic differences among college students." *Journal of Career Development*. vol. 28. no. 4. pp. 277–284. 2002.
- Yang, J., Chen, Y., & Wang, Y. Exploring the interplay of motivation, engagement, and critical thinking among EFL learners: Evidence from structural equation modelling. *European Journal of Education*. 60. 2025. e70187. <https://doi.org/10.1111/ejed.70187>
- Z. M. Jelas et al.. *Laporan Penyelidikan: Analisis Gender dalam Pendidikan*. Kementerian Pendidikan Malaysia. 2013.
- Z. Morris. *50 Tahun Pembangunan Pendidikan Tinggi di Malaysia 1957–2007*. Pulau Pinang: Universiti Sains Malaysia. 2007.

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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