Vol 15, Issue 01, (2025) E-ISSN: 2222-6990

Self-Efficacy in Career Decision Making and Outcome Expectation among Final Year Students

Anis Fatima Savugathali¹, Muhammad Bazlan Mustafa^{2*} & Ahmad Jazimin Jusoh³

Faculty of Human Development, Sultan Idris Education University, Malaysia 123
Corresponding Author Email: bazlan@fpm.upsi.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v15-i01/23624 DOI:10.6007/IJARBSS/v15-i01/23624

Published Date: 03 January 2025

Abstract

The employability of graduates in the field of employment is a government agenda to ensure that the unemployment rate can be reduced. Following that, various parties have implemented different ways to help graduates find employment. Although efforts have been made, there are a few graduates in Science, Arts and Social Sciences, and Information and Communication Technology who are still lacking in making career decisions, so that they fail to make good career considerations. To overcome this problem, the main goal of the analysis is to provide insight into the student's self-efficacy in career decision-making and their outcomes expectations. This study obtained 765 final-year students at one university in Malaysia. The result showed that there is a significant difference in students' self-efficacy in career decision-making and their outcomes expectations based on faculty. The results of this study have significant implications for experts engaged in the field of career development or university counselors to make sure final-year students in certain fields have more confidence to face the labor market.

Keywords: Self-Efficacy in Career Decision Making, Career Outcome Expectation, Employment

Introduction

Final-year students who are about to complete their degree must face an important process in their lifes to make decisions about their future careers. This period involves uncertainty in balancing academic achievements, personal interests, and demands of the job market. At this stage, it is complex to make career decision-making because it is influenced by internal and external factors, which shape how students perceive their ability to navigate this transition. Individual internal factors are related to self-efficacy beliefs when performing actions to achieve a specific goal (Schunk, & DiBenedetto, 2021). According to Bandura's Social Cognitive Theory (1977), individuals with high self-efficacy are more likely to engage in goal-orientated behaviour, persist in the face of obstacles, and demonstrate greater confidence in their decision-making abilities. These self-efficacy beliefs are especially important for final-year students, as they influence motivation, resilience, and the ability to pursue career

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

opportunities, even in challenging labour markets. Bandura (1997) also suggests that individuals' self-esteem can be affected by their beliefs about their abilities, particularly when success or failure is closely tied to their sense of self-worth.

In the context of career decision-making, self-efficacy refers to an individual's confidence in their ability to carry out tasks necessary for job preparation, entry, or adjustment (Lent & Brown, 2013). Research by Liu, Draper, and Dawson (2023) highlights that work experiences, such as internships and co-curricular activities, can positively influence career decision-making self-efficacy (CDMSE) by providing students with practical exposure and helping them assess their career preferences in real-world settings. Students with high self-efficacy tend to proactively explore career opportunities, research potential job options, network, and apply for positions, believing in their ability to succeed (Petruzziello et al., 2021). These students are also more likely to align their academic achievements and practical experiences to identify career opportunities that match their skills and interests (Kanar & Heinrich, 2024).

On the other hand, outcome expectations-students' beliefs about the consequences of their career decisions, also play a crucial role in shaping career choices. Students who anticipate positive outcomes, such as job satisfaction, are more motivated to take the necessary steps toward achieving their goals (Clements & Kamau, 2017). The greater the expectation of a rewarding outcome, the more likely students are to actively seek career opportunities and pursue their goals with confidence (Lent, Brown, & Hackett, 1994). According to Lent, Ireland, and Penn (2017), students with realistic and positive career outcome expectations are more likely to engage in job-seeking behaviors and persist in their career choices, even when faced with challenges.

The model of career self-management (Lent & Brown, 2013) suggests that learning experiences and past achievements shape self-efficacy, which in turn influences career-related outcomes. Self-efficacy and career outcome expectations are interconnected, as high self-efficacy can foster positive outcome expectations, further motivating students to pursue their career goals. In contrast, students with low self-efficacy may have more cautious expectations, which could lead to a more reserved approach to career decision-making (Hinduja, Fakir Mohammad, & Siddiqui, 2024).

Studies show that high self-efficacy in career decision-making is associated with lower career-related anxiety and greater commitment to chosen career paths, making the transition from education to employment smoother (Kleine, Schmitt, & Keller, 2023; Vingki & Ranto, 2023). Lam and Pham (2023) and Doyle, Postlewaite, Sadler and Sonnert, (2023) emphasized that higher self-efficacy in making career decision is associated with more positive career outcome expectations. Individuals who are confident in their career decision-making abilities expect better outcomes and are motivated to pursue their chosen career paths.

Understanding the interplay between self-efficacy and outcome expectations is crucial for supporting students during this pivotal stage of their lives. This journal aims to explore the roles of self-efficacy and outcome expectations in career decision-making among final-year students. By examining existing theories and research, the paper will identify the key factors

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

influencing students' career choices and offer insights into how career counseling and educational interventions can enhance students' confidence and decision-making abilities.

Problem Statement

During their final semester at university, students are often confronted with the expectations of achieving certain career outcomes. When these expectations are unmet, it can negatively affect their self-belief. Research indicates that the mismatch between academic disciplines and corresponding career opportunities (Salas-Velasco, 2021) often undermines students' confidence, especially when faced with uncertain job prospects (Alisic & Wiese, 2020). Enhancing career planning has been shown to positively influence self-efficacy beliefs and reduce career-related anxiety as graduation approaches (Kleine, Schmitt, & Keller, 2023).

The increasing issue of education-occupation mismatch contributes to higher unemployment rates, as many graduates struggle to secure jobs aligned with their academic training. This mismatch often leads to frustration and disillusionment, as graduates find themselves in positions unrelated to their field of study (Mohd Amirul Rafiq, Diana & Rohan, 2023). According to Bian (2020), such mismatches can result in a salary penalty and career regret.

In career management models, self-efficacy and learning experiences play a crucial role in shaping career outcome expectations (Thompson, Dahling, Chin, & Melloy, 2017). Poor career planning and lack of interest in a particular job can lead to misguided career choices. Additionally, insufficient, relevant information about career options may cause disappointment when expectations are not met (Azhenov, Kudysheva, Fominykh, & Tulekova, 2023). These challenges are especially prominent for final-year students in fields with critical courses and limited job prospects.

Despite the importance of self-efficacy in career decision-making and outcome expectations, research in this area remains limited, particularly in critical fields of study. This study aims to explore how final-year students perceive and develop career decision-making self-efficacy and how these perceptions align with their expectations and career outcomes.

Methodology

Based on empirical data obtained from the graduate tracking report of the Ministry of Higher Education 2016 there are three major areas with the highest unemployment rates. This major area related field of study in Science, Arts and Social Sciences and Information and Communication Technology. So, the data is collected in Malaysia. A total 765 final year undergraduate students from three faculty completed in this study. The survey used in this study are Career Decision Making Self Efficacy-Short Form (Betz, Klein & Taylor, 1996) and Career Decision Making Outcome Expectancies (Betz & Voyten, 1997).

Result and Discussion

One-way ANOVA were performed to determine the differences self-efficacy in career decision making (Table 1 and 2) and career outcome expectation (Table 3 and 4) with students' faculty. However, bivariate correlations were performed using Pearson's correlations to determine associations between self-efficacy in career decision making and career outcome expectation (Table 5).

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

The results show that there is a significant difference in career decisions making self-efficacy [F(2, 762) = 14.957, p<0.001] based on faculty final year students. Post Hoc Tukey test showed that score mean for career decision making self-efficacy Faculty Social Sciences and Humanities (FSSH) and Faculty of Information Science and Technology (FIST) higher than Faculty of Science and Technology (FST). Each student has a different belief according to the field of study. Experience in related fields has equipped them with scientific knowledge and skills as well as highlighting their competence in various aspects.

Table 1
ANOVA's Results for Self-Efficacy in Career Decision Making Based on the Faculty of the Final Year's Students

Variable		Sum of	df	Mean	F	р
Variable		Squares	u.	Square	•	۲
Self-efficacy in	Between	6.484	2	3.242	14.957**	0.001
career decision	group					
making	In group	165.163	762	0.217		

Table 2
Post Hoc Tukey Test Result for Self-Efficacy in Career Decision Making Based on the Faculty of the Final Year's Students

Variable	Faculty (I)	Faculty (J)	Mean Difference
Calf afficacy in career desision making	TCC11	FIST	-0.19275*
Self-efficacy in career decision making	FSSH	FST	-0.18361*

The results showed that there was a significant difference in career outcome expectations [F(2,762) = 4.699, p < 0.05] based on faculty final year students. Post Hoc Tukey test showed that there are different significant mean career outcome expectation among students pelajar Faculty of Information Science and Technology (FIST) and Faculty Social Sciences and Humanities (FSSH).

Table 3

ANOVA's Results for Career Outcome Expectation Based on the Faculty of the Final Year's Students

		Sum of Squares	df	Mean Square	F	р
Caereer outcome	Between	4.409	2	2.205	4.699	0.009
expectation	group					
	In group	357.541	762	0.469		

Table 4

Post Hoc Tukey Test Result for Career Outcome Expectation Based on the Faculty of the Final Year's Students

Variable	Faculty (I)	Faculty (J)	Mean Difference
Carpor outcome expectation	EICT	FSSH	0.10820
Career outcome expectation	FIST	FST	0.20746*

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

Table 5
The Relationship Career Decision Making Self-Efficacy and Career Outcome Expectation among Final Year Students

	Career Decision Making Self-Efficacy		
Variable	r	p	
Career Outcome Expectation	0.189**	0.001	

The result showed there have positive significant relationship among career decision making self- efficacy r = 0.189, p = 0.001 with career outcome expectation. The relationship shown for self-efficacy in making career decisions is high, so the expected career results are also high.

Discussion

Given the many disciplines of study, understanding student's self-efficacy might promote career decision making and their outcome expectation. There are significant differences in self-efficacy in making career decisions based on faculty. In this study, self-efficacy is associated with the beliefs of final-year students in the fields of Social Sciences and Humanities, Science and Technology, also Information Technology and Science.

Through the experience they gain while attending university, students might develop specialist skills related to their field of study. There are a number of studies in each field that help students get ready for the job market ahead of time. Technology field provide more practical experience and direct exposure to industrial positions tend to promote self-efficacy in career decision-making. This makes students feel more confident in their ability to try new things and focus on different tasks as needed.

Certain faculties may provide environments or resources that better support students' confidence in making career decisions. For instance, field of study in Social Sciences and Humanities offer career-focused guidance, or practical projects, all of which can strengthen career-related self-efficacy (Hoang & Huy, 2021). On the other hand, the lower CDMSE scores among Faculty of Science and Technology students could indicate that this student may lack specific resources or experiences that build self-efficacy in career decision-making.

The findings of this study are in line with the research conducted by Ludwikowski, Armstrong, Redmond, dan Ridha (2019), which found that the students in the Humanities field have better self-efficacy compared to students in the Biological Sciences and Medicine field. This indicates that each student has possesses different levels of confidence according to their field of study. Experience in related fields has equipped them with various knowledge and skills, as well as highlighted their competence in many aspects. Students who believe in themselves are capable of organizing or implementing plans do better in their careers.

Key characteristics that contribute to this anticipation are demonstrated by students in their last year of study in critical fields who are self-assured, optimistic, and have higher self-efficacy belief. Higher self-efficacy has been linked to more career planning and greater motivation to pursue a career (Arghode, Heminger, & McLean, 2021). In fact, all this will raise their expectations of what will happen by thinking about their interest, skills, and goals through informal self-assessment. They give them the confidence, positivity, and awareness they need to make good decisions on their work paths.

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

Next, the results of this study found that final-year students from the Faculty of Social Sciences and Humanities, the Faculty of Science and Technology, and the Faculty of Information Technology and Science have different career expectations. This is due to the fact that each field provides a unique set program and skills align with various job roles. Recognizing how these abilities correspond with career expectations, students can choose programs that not only match their interests but also prepare them for successful careers.

According to the Social Cognitive Career Theory, a person's expectations for their career are based on their beliefs about what would happen if they engage in particular activities. It also refers to the representation of the outcomes that will follow specific acts. In a certain situation, individuals with positive outcome expectations will avoid making certain choices if they doubt their ability to succeed (Lent & Brown, 2013). In choosing a career, students need to have confidence in their abilities and expectations for the desired outcomes (Fathurrahim, 2022).

Besides that, according to Lent (2005), outcome expectations for making academic choices are shaped by various experiences. Student experiences are formed as a result of observing other students and the actions they take. Students who build career outcome expectations can create career paths based on various learning experiences, whether obtained directly or indirectly. For example, the field of Social Sciences is a field of knowledge about humans. Students who feel they can work with other individuals believe that with their skills enable them to secure desirable employment as they aspire.

Steegh, Höffler, Keller, and Parchmann (2019), highlights how the competitive aspect in career expectations. Which is, in this study students from each faculty have distinct perspectives on what they expect from their careers. For instance, students from a technology field might anticipate higher salaries and faster career growth due to industry trends, whereas students from social sciences might value job stability or meaningful work more highly. These differences could stem from how each field of study prepares students for the job market, the types of career paths commonly associated with each discipline, or students' own motivations and values shaped by their academic experiences.

The relationship shown for self-efficacy in making career decisions among final years students is high, so the expected career results are also high. If individuals have high career outcome expectations, self-efficacy will lead them to develop a tendency to choose that career (Lent & Brown, 2013). In the context of career decision-making, Social Cognitive Theory posits that self-efficacy beliefs and outcome expectations significantly influence how individuals' approach, evaluate, and commit to career paths (Bandura, 1997). These particularly relevant for final-year students as they navigate the challenges of selecting and preparing for their future careers.

Students with high career outcome expectations may have already identified their future jobs (Domene, Socholotiuk, & Woitowicz, 2011) and shape their current perceptions of that career (Spier, 2020). Final years students with both high self-efficacy and positive outcome expectations tend to exhibit greater career exploration behaviors, set higher career goals, and demonstrate more resilience in the face of challenges. Students with strong self-efficacy are more likely to anticipate positive outcomes. Similarly, favorable outcome

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

expectations can enhance students' abilities. This interplay is critical for final-year students, who must evaluate their strengths, aspirations, and career prospects to make informed decisions.

Characteristics or factors of self-efficacy provide students with the information and skills they need to become more confident and set realistic expectations for their future (Liu, Draper, & Dawson, 2023; Lam & Pham, 2023). People who have strong self-confidence in their work values can advance in their careers and begin taking the right steps to reach their goals (Cordova, 2022). So, in this study indicate that final-year students in various critical fields possess mature emotions in their career development. Students who are mature from a psychological aspect show that they can make good career plans and are able to understand career-related concepts. Which are students with high self-efficacy demonstrate that they have positive career outcome expectations.

Research Implication

This research provides evidence higher education institutions establish a suitable curriculum that can help final year students in critical field acquire the necessary skills to satisfy the needs of the labor market. By recognizing these discipline-specific disparities, university can discover areas where students perceive themselves as inadequately prepared or lacking confidence regarding their career trajectories. This enables universities to offer specialized support, including industry-specific mentorship, practical seminars, or internships, which may assist students in developing the confidence required to make educated career choices.

Beside that co-curricular by university programming also can helps students explore career paths, understand their own skills, and recognize how their skills are relevant to different occupations (Kanar & Heinrich, 2024). Through this student can gain more learning experience, gain knowledge and upgrade their skills in variety ways to preparing to enter labor market. For final-year students, self-efficacy and outcome expectations can shape not only immediate career decisions (like job selection) but also long-term career satisfaction and adaptation especially for critical field.

The study highlights deficiencies in students' career understanding and planning, prompting educational institutions to develop more comprehensive career advisory programs (Noorhuda, Nurul Izni & Harsherin, 2024). For students with unrealistic outcome expectations, counseling can help set more achievable goals, addressing misconceptions about career fields and aligning expectations with market realities. Counselors can tailor career guidance based on student's self-efficacy level and their outcome expectations. For students with low self-efficacy, Counselors may concentrate on boosting confidence by providing comfort, citing prior accomplishments to boost self-belief, and breaking down the career decision-making process into digestible phases.

Future Research

For future research, exploring self-efficacy and career outcome expectations among students in diverse disciplines could benefit from longitudinal studies that track students from their final academic years through early career stages. By addressing particular obstacles students encounter and improving career assistance procedures, such study could advance fair career success. This technique would provide insights into how self-efficacy changes in response to

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

real-world employment experiences, as well as how it affects career satisfaction and flexibility.

Additionally, universities should implement targeted curriculum elements aimed at improving self-efficacy and career outcome expectations among final-year students. Given that this study comprises students from critical fields of study, doing longitudinal studies would be advantageous. Such research can provide more information about how students from various backgrounds build career decision-making self-efficacy and results expectations.

Conclusion

In conclusion, final-year students in critical fields across various disciplines exhibit varying levels of self-efficacy and career outcome expectations. The study highlights the significance of self-efficacy in the process decision-making and the major influence that it has on the expectations regarding their career outcomes in their final year. Students have the ability to set career objectives that are both reasonable and feasible when they have a high level of self-efficacy. At this point in their academic journey, they are expected to make key decisions that will shape their future careers. This study also demonstrates that there is a gap between the career expectations of students and the actual employment market. This highlights the necessity of greater career guidance and practical experience in order to assist students in adjusting their objectives related to their careers. By fostering self-efficacy through targeted programs, internships, and realistic career planning, universities can help students build a stronger foundation for career success, ultimately bridging the gap between academic preparation and their outcome expectations.

References

- Alisic, A., & Wiese, B.S. (2020). Keeping an insecure career under control: The longitudinal interplay of career insecurity, self-management, and self-efficacy. *Journal of Vocational Behavior*, 120, 103431. https://doi.org/10.1016/j.jvb.2020.103431.
- Arghode, V., Heminger, S., & McLean, G.N. (2021. Career Self-Efficacy and Education Abroad: Implications for Future Global Workforce. European Journal of Training and Development, 45(1), 1-13
- Azhenov, A., Kudysheva, A., Fominykh, N., & Tulekova, G. (2023). Career decision-making readiness among students' in the system of higher education: career course intervention. *Frontiers in Education*, 8. https://doi.org/10.3389/feduc.2023.1097993
- Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review, 84* (2), 191-215.
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.
- Betz, N., Klein, K., & Taylor, K. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment, 4,* 47-57.
- Betz, N. E., & Voyten, K. K. (1997). Efficacy and outcome expectations influence career exploration and decidedness. *Career Development Quarterly*, 46(2), 179-189.
- Bian, X. (2020). Employment mismatch from a distributive justice perspective. *European Journal of Training and Development, 44*(8/9), 829-845. https://doi.org/10.1108/ejtd-01-2020-0012.
- Clements, A. J., & Kamau, C. (2017). Understanding students' motivation towards proactive career behaviours through goal-setting theory and the job demands—resources model. *Studies in Higher Education, 43*(12), 2279–2293.

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

- Cordova, C. G. (2022). The career decision-making self-efficacy and career action steps of humanities students: A quantitative survey analysis (Order No. 29065062). Available from ProQuest Dissertations & Theses Global. (2660072859). Retrieved from https://www.proquest.com/dissertations-theses/career-decision-making-self-efficacy-action-steps/docview/2660072859/se-2.
- Domene, J. F., Socholotiuk, K. D., & Woitowicz, L. A. (2011). Academic motivation in post-secondary students: Effects of career outcome expectations and type of aspiration. *Canadian Journal of Education, 34,* 99-127.
- Doyle, J., Postlewaite, E., Sadler, P. M., & Sonnert, G. (2023). Differences in career outcome expectations of college students by race/ethnicity and gender. Journal of Underrepresented and Minority Progress, 7, (1), 1-26.
- Fathurrahim. (2022). Pengaruh personaliti proaktif dan efikasi kendiri membuat keputusan kerjaya ke atas jangkaan hasil kerjaya pelajar universiti. Tanjong Malim: Universiti Pendidikan Sultan Idris.
- Hinduja, P., Fakir Mohammad, R., & Siddiqui, S. (2024). Factors Influencing Students' Academic Self-Efficacy in Related Domains. *Sage Open,* 14(4). https://doi.org/10.1177/21582440241289738
- Hoang, N.T., & Huy, D.T.N. (2021). Determining Factors for Educating Students for Choosing to Work for Foreign Units: Absence of Self-Efficacy. *Journal for Educators, Teachers and Trainers*, 12(2), 11-19.
- Kanar, A. M., & Heinrich, B. (2024). The impact of university co-curricular activities on competency articulation proficiency: A mediated model. *The Career Development Quarterly*, *1*-12. https://doi-org.ezpustaka2.upsi.edu.my/10.1002/cdq.12358
- Kleine, A.-K., Schmitt, A., & Keller, A. C. (2023). Career Planning and Self-Efficacy as Predictors of Students' Career-Related Worry: Direct and Mediated Pathways. *Journal of Career Development*, *50*(1), 185-199. https://doi.org/10.1177/08948453221078950
- Lam, Q. B., & Pham, M. (2023). Assess the role of career exploration in expanding social cognitive career theory. *Advances in Business-Related Scientific Research Journal*, 14 (1), 15-26.
- Lent, R. W. (2005). A Social Cognitive View of Career Development and Counseling. In S. D. Brown & R. W. Lent (Eds.), Career development and counseling: Putting theory and research to work (pp. 101-127). John Wiley & Sons, Inc.
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology*, 60 (4), 557-568.
- Liu, Y., Draper., J., & Dawson, M. (2023). The Relationship between Work Experience and Career Expectations: Career Decision-Making Self-efficacy as Mediator, Journal of Hospitality & Tourism Education, 35:3, 213-224.
- Ludwikowski, W., Armstrong, P., Redmond, B., & Ridha, B. (2019). The role of ability in the selection of majors. *Journal of Career Assessment*, *27*(3), 422-439. https://doiorg.ezproxy.lib.usf.edu/10.1177/1069072718758067.
- Ministry of Higher Education (2017). Graduate Tracking Report 2016: Graduate (Citizen) Not Yet Employed.
- Ministry of Higher Education (2018). Graduate Tracking Report 2017: Graduate (Citizen) Not Yet Employed.
- Ministry of Higher Education (2019). Graduate Tracking Report 2018: Graduate (Citizen) Not Yet Employed.

Vol. 15, No. 01, 2025, E-ISSN: 2222-6990 © 2025

- Ministry of Higher Education (2020). Graduate Tracking Report 2019: Graduate (Citizen) Not Yet Employed.
- Ministry of Higher Education (2021). Graduate Tracking Report 2020: Graduate (Citizen) Not Yet Employed.
- Rafiq, D., Diana, A., & Rohan, S. (2023). School-to-work transition and job mismatch among the young workers in Malaysia. *International Journal of Business and Economy, 5*(1) 84-101.
- Thompson, M.N., Dahling, J.J., Chin, M.Y., & Melloy, R.C. (2017). Integrating Job Loss, Unemployment, and Reemployment with Social Cognitive Career Theory. *Journal of Career Assessment*, 25(1) 40-57.
- Petruzziello, G., Mariani, M.G., Chiesa, R., and Guglielmi, D. (2021). Self-efficacy and job search success for new graduates. *Personnel Review*, *50*(1) 225-243.
- Salas-Velasco, M. (2021). Mapping the (mis)match of university degrees in the graduate labor market. *Journal Labour Market Research*, *55*, 14. https://doi.org/10.1186/s12651-021-00297-x.
- Schunk, D. H., & DiBenedetto, M. K. (2021). Chapter Four Self-efficacy and human motivation. *Advances in Motivation Science*, 153-179.
- Spier, C. (2020). Effects of career courses on career self-efficacy and outcome expectations (Order No. 28259370). Available from ProQuest Dissertations & Theses Global; Publicly Available Content Database. (2476842711). Retrieved from https://www.proquest.com/dissertations-theses/effects-career-courses-on-self-efficacy-outcome/docview/2476842711/se-.
- Steegh, A. M., Höffler, T. N., Keller, M. M., & Parchmann, I. (2019). Gender differences in mathematics and science competitions: A systematic review. *Journal of Research in Science Teaching*, *56*(10), 1431-1460.
- Vingki, S., & Ranto, D. (2023). The Influence of Entrepreneurship Education, Self-Efficacy and Locus of Control on Students' Entrepreneurial Intentions in Yogyakarta. *Asian Journal of Management Analytics*, 2 (4) 405-414. https://doi.org/10.55927/ajma.v2i4.6486