The Impact of Student Integration, Academic Motivation, and Self-Esteem on Academic Performance: A Conceptual Model for Malaysian Universities

Nur Kamarul Hafiz bin Jamil, Amir Faisal bin Ahamed Latfi

Faculty of Business, UNITAR International University, Selangor

DOI: https://dx.doi.org/10.47772/IJRISS.2025.91100107

Received: 20 November 2025; Accepted: 27 November 2025; Published: 01 December 2025

ABSTRACT

This conceptual paper examines how peer mentoring influences academic growth among university students in Malaysia, grounded in Social Learning Theory. These programs, where senior students mentor juniors, are increasingly recognized for improving retention, engagement, and performance. However, their implementation in Malaysian universities remains inconsistent and lacks a unified theoretical foundation. The study proposes a framework that views academic development as the primary outcome affected by three key factors: student integration, academic motivation, and self-esteem. These factors function as mechanisms through which mentoring enhances self-efficacy, persistence, and resilience. The paper reviews both international and local literature to demonstrate how observational learning, modelling, and reinforcement within mentoring relationships foster academic success. A survey-based, quantitative research design utilizing PLS-SEM analysis is outlined to test the framework. This research advances theory by applying Social Learning Theory to structured peer mentoring and provides practical insights for creating effective mentoring programs. The goal is to help institutions improve student engagement, academic achievement, and well-being, ultimately reducing dropout rates and enhancing overall educational outcomes.

Keywords: Peer mentoring, Student integration, Academic motivation, Self-esteem, Academic development

INTRODUCTION

Entering university brings significant challenges for students, such as academic demands, social isolation, and emotional pressures. First-year students are especially at risk, often finding it hard to adjust to new learning environments, which can result in lower performance and higher dropout rates [15, 47]. Peer mentoring programs, where senior students support juniors, have shown positive outcomes worldwide, enhancing retention, GPA, and student engagement [17, 8, 18, 20]. In Malaysia, these programs are becoming more common, but their deployment remains inconsistent and lacks standardized empirical evidence [24, 33, 45].

Malaysian universities struggle to establish structured peer-mentoring programs despite recognizing their benefits, mainly because of limited research on their effectiveness and the absence of a solid theoretical basis [34, 15, 45]. Without a clear conceptual framework, these programs risk not producing measurable academic improvements. This conceptual paper aims to develop a framework that explains how peer mentoring affects student academic growth in Malaysian universities. It focuses on the roles of student integration, academic motivation, and self-esteem as key factors. By reviewing both international and local literature and grounding the discussion in established theory, particularly Social Learning Theory, which emphasizes learning through observation, modelling, and reinforcement in social contexts [12, 45], the paper proposes that peer mentoring can enhance academic achievement by promoting self-efficacy, motivation, and social integration.

LITERATURE REVIEW

Underpinning Theory Foundation for Developing Research Constructs

Social Learning Theory posits that people learn by watching others and imitating behaviours that lead to success [23, 25, 16]. Peer mentoring exemplifies this idea by offering mentees role models—senior students who

showcase effective study strategies and coping skills. Through observing and engaging with these models, mentees adopt and internalize these behaviours, boosting their academic growth [36, 8]. A central aspect of this theory is self-efficacy, which affects motivation, perseverance, and resilience; key factors in this research [12, 49]. Peer mentoring enhances self-efficacy via vicarious experiences (seeing mentors succeed), verbal encouragement (feedback and support), and emotional reassurance (reducing anxiety) [10, 22, 35]. These pathways illustrate how mentoring influences academic motivation and self-esteem. Additionally, Social Learning Theory highlights the importance of social reinforcement and environmental context, aligning with student integration.

Academic Development

Academic development involves improving students' academic performance and learning skills through structured peer-mentoring programs [22, 6]. It goes beyond just grades to include better study habits, time management, and active participation in academic activities [5, 13, 4]. Peer mentoring offers mentees guidance and support, helping them adjust to university life, tackle educational challenges, and build confidence in their learning abilities [2, 30, 44].

Academic development also involves gaining key skills like critical thinking, problem-solving, and effective communication, which are vital for success in higher education and future careers [9, 13, 4]. These skills are developed through mentor-mentee interactions that provide experiential learning and personalized feedback [2, 36, 21]. Evidence shows that students involved in peer mentoring tend to have higher GPAs, display greater persistence, and feel more satisfied with their academic journey than those who do not participate [6, 42].

In this conceptual framework, academic development is positioned as the primary outcome variable, influenced by peer mentoring through three driving factors, particularly student integration, academic motivation, and self-esteem. These constructs collectively shape students' academic performance and their ability to thrive in the university environment.

Student Integration, Academic Motivation, and Self-Esteem

The study proposes independent variables such as student integration, academic motivation, and self-esteem, which are key factors through which peer mentoring impacts academic development. These concepts are grounded in Social Learning Theory, which highlights that learning occurs through observation, modelling, and reinforcement in social settings.

Student integration measures how connected students feel to their academic and social environment. As noted in [11, 49], integration is vital for persistence and success in higher education. Peer mentoring programs enhance integration by providing structured interaction opportunities, encouraging participation in campus activities, and fostering supportive peer networks. This sense of belonging reduces feelings of isolation and promotes active engagement in academic tasks, which ultimately enhances academic performance [20, 28].

Academic motivation involves both internal and external factors that influence students' commitment to learning. Drawing from Self-Determination Theory and supported by Social Learning Theory, motivation can be intrinsic, such as the desire for knowledge, or extrinsic, driven by rewards and recognition [49, 26]. Peer mentoring enhances motivation by providing goal-setting strategies, constructive feedback, and positive reinforcement. Observing successful mentors also offers vicarious experiences that increase mentees' confidence in their ability to succeed, leading to greater persistence and academic engagement [7, 27].

Self-esteem pertains to how students view their academic abilities and general self-worth. When students have high self-esteem, they are more likely to engage actively in learning, show resilience, and feel confident in overcoming academic difficulties. Conversely, low self-esteem is often linked to avoidance behaviours and poorer performance [32, 48]. Peer mentoring programs enhance self-esteem by providing validation, encouragement, and emotional support. Mentors serve as role models, showcasing effective coping strategies and boosting mentees' confidence in their academic skills [24, 46].

Relationships Between Independent and Dependent Variables

The relationship between student integration, academic motivation, self-esteem, and academic development is emphasized. These variables operate as mechanisms through which mentoring programs influence students' academic success.

1) **Student Integration and Academic Development:** Student integration is essential for positive academic outcomes. When students feel socially and academically connected to their school, they are more likely to participate actively in learning and persevere through difficulties [43, 38]. Peer mentoring supports this integration by providing structured opportunities for interaction and the development of supportive peer networks. Previous studies show that integrated students exhibit higher engagement and better academic performance [29, 47]. Therefore, the hypothesis is stated as follows:

H1: Student integration significantly influences the academic development outcomes among university students in Malaysia.

2) **Academic Motivation and Academic Development:** Academic motivation is a critical driver of persistence and achievement. Peer mentoring enhances motivation by providing goal-setting strategies, constructive feedback, and positive reinforcement [42, 49]. Observing successful mentors creates vicarious experiences that strengthen mentees' belief in their ability to succeed, consistent with Social Learning Theory. Empirical evidence supports the notion that motivated students exhibit better study habits, higher GPA, and greater commitment to academic tasks [14, 7, 45]. Therefore, the study proposes a hypothesis that:

H2: Academic motivation significantly influences the academic development outcomes among university students in Malaysia.

3) **Self-Esteem and Academic Development:** Self-esteem influences students' confidence in their academic abilities and their willingness to engage in challenging tasks [37, 7]. Peer mentoring programs improve self-esteem through validation, encouragement, and emotional support. Mentors act as role models, demonstrating effective coping strategies and reinforcing mentees' confidence in their academic potential [41, 22, 39]. Past studies indicate that increased self-esteem leads to proactive learning behaviours, resilience, and improved educational outcomes [7, 10]. Hence, a hypothesis is proposed that:

H3: Self-esteem significantly influences the academic development outcomes among university students in Malaysia.

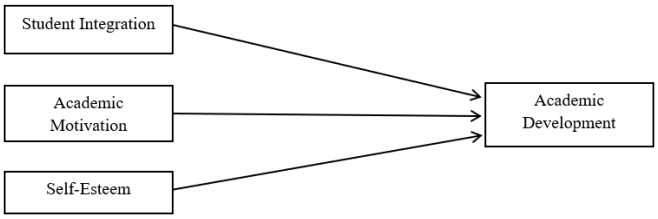

Fig. 1 Proposed Conceptual Framework

PROPOSED METHODOLOGY

This study employs a quantitative research design and a survey to examine the impact of peer mentoring programs on academic development among university students. A quantitative approach is appropriate as it allows for systematic measurement of variables and statistical testing of hypotheses [3, 42, 31]. The design is cross-sectional, capturing data at a single point in time to assess relationships between peer mentoring and academic outcomes [3, 47]. The target population comprises undergraduate students at private universities located in Petaling Jaya, Selangor, Malaysia, including both mentors and mentees who have participated in peer mentoring programs. This population was selected because it represents diverse academic disciplines and year levels, ensuring comprehensive insights into the effectiveness of mentoring initiatives.

A sample size of 150 students is expected to provide adequate representation across different programs and year levels. The study employs stratified random sampling, dividing the population into strata based on academic program and year of study. This method ensures proportional representation and minimizes sampling bias, thereby enhancing the generalizability of findings [5, 3, 29]. Data will be collected using a structured questionnaire developed based on past studies. The questionnaire consists of three sections:

Section A: Demographic information (e.g., age, gender, program, year of study).

Section B: Independent variables (student integration, academic motivation, self-esteem).

Section C: Dependent variable (academic development).

The instrument features both closed-ended and Likert-scale questions to gauge respondents' perceptions and experiences. Participants will respond using a five-point Likert scale, from 1 (Strongly Disagree) to 5 (Strongly Agree). This approach transforms subjective experiences into numerical data, allowing for statistical analysis and hypothesis testing [40, 31]. Data will be analysed with SPSS and SmartPLS. SPSS will handle descriptive statistics (such as mean and standard deviation) and inferential tests (such as correlation and regression analyses) to explore relationships between variables [1, 31]. Reliability will be assessed using Cronbach's alpha in SPSS to measure internal consistency [1, 10]. SmartPLS will be employed for Partial Least Squares Structural Equation Modeling (PLS-SEM) to validate the framework and examine relationships among constructs. This combined approach ensures comprehensive statistical validation and evaluation of both measurement and structural models [33, 49, 45].

Expected Contributions

This study expands the use of Social Learning Theory to peer mentoring in Malaysian higher education. While the theory has been extensively applied in behavioural and educational studies, incorporating it into peer mentoring research offers fresh perspectives on how observational learning, modelling, and reinforcement influence academic development. By linking peer mentoring to variables such as student integration, motivation, and self-esteem, the research offers a solid framework for understanding how mentoring enhances academic success. The model advances current knowledge by demonstrating how self-efficacy, a crucial aspect of Social Learning Theory, shapes mentoring's impact on educational outcomes. This theoretical contribution paves the way for future empirical investigations and cross-cultural analyses.

Practically, this study offers helpful guidance for universities seeking to enhance student retention and academic achievement through effective peer mentoring programs. It emphasizes essential elements such as student integration, motivation, and self-esteem, which should be the focus when designing these programs. By understanding these factors, university administrators can develop targeted strategies, such as comprehensive mentor training, scheduled interactions, and feedback mechanisms, that encourage positive behaviours and academic engagement. The results also support the creation of evidence-based policies at the institutional level, ensuring mentoring initiatives are both effective and research-informed. Overall, this research serves as a blueprint for developing sustainable mentoring systems that boost students' academic success and well-being.

CONCLUSION

This conceptual paper presents a framework explaining how peer mentoring programs influence university students' academic development in Malaysia. Drawing on Social Learning Theory, the framework emphasizes observational learning, modelling, and reinforcement as primary mechanisms through which mentoring fosters academic achievement. It highlights student integration, motivation, and self-esteem as core components, providing a theoretically robust and practically useful model for understanding peer mentoring dynamics.

The framework advances theory by applying Social Learning Theory to structured peer mentoring in higher education, providing insights into how self-efficacy and social modelling function beyond traditional classrooms. In practice, it guides universities in creating evidence-based mentoring programs to increase academic engagement, boost performance, and support student well-being.

Future research should commence with pilot empirical studies to refine and validate the proposed framework prior to large-scale implementation. It is essential to incorporate context-specific elements including institutional policies, dominant learning styles, and cultural norms to enhance the framework's applicability across diverse educational settings. Furthermore, the model should be extended to account for additional environmental and psychological factors, such as learning climate and social support, which may significantly influence the effectiveness of peer mentoring.

Subsequent investigations should aim to provide empirical evidence that supports the standardization of peer mentoring procedures within academic institutions, guided by data derived from the validated framework. Finally, adopting mixed-methods research designs will enable a more comprehensive understanding of mentoring relationships by integrating quantitative outcomes with qualitative insights.

REFERENCES

1. Ahmad, N., Alias, F. A., Hamat, M., & Mohamed, S. A. (2024). Reliability analysis: Application of Cronbach's alpha in research instruments. In Pioneering the future: Delving into e-learning's landscape (pp. 114–119). Universiti Teknologi Mara.
2. Al Aqeel, S., & Alhumaid, H. K. (2024). Undergraduate university students mentoring program: Experiences of mentors and mentees. Frontiers in Education, 9. https://doi.org/10.3389/feduc.2024.1486398
3. Al Yahyaei, A., Natarajan, J. R., Seshan, V., Joseph, M. A., Valsaraj, B. P., & Al Abri, F. H. (2024). The usefulness of peer tutoring and its impact on nursing students' academic performance, psychological empowerment, and satisfaction: Pre-post design. SAGE Open Nursing. https://doi.org/10.1177/23779608241282168
4. Alghamdi, S. A., Aljaffer, M. A., Alahmari, F. S., Alasiri, A. B., Alkahtani, A. H., Alhudayris, F. S., & Alhusaini, B. A. (2023). The impact of low self-esteem on academic achievement and related behaviors among medical students in Saudi Arabia. Saudi Medical Journal, 44(6), 613–620. https://doi.org/10.15537/smj.2023.44.6.20230055
5. Almulhim, F. A., Iqbal, K., Al Samman, F. M., Ali, A., &Almazah, M. M. (2024). An optimal estimation approach for stratified random sampling using two auxiliary attributes, with applications in the agricultural, demographic, financial, and education sectors. Heliyon, 10, e37234. https://doi.org/10.1016/j.heliyon.2024.e37234
6. Alonso García, M. A., & García, M. A. (2024). Effectiveness of peer mentoring on university dropout and academic performance. Psicología Educativa, 30(1), 29–37. https://doi.org/10.5093/psed2024a5
7. Amador Campos, J. A., Peró Cebollero, M., Feliu Torruella, M., Pérez González, A., Cañete Massé, C., Jarne Esparcia, A. J., Triadó Ivern, X., & Guàrdia Olmos, J. (2023). Mentoring and research self-efficacy of doctoral students: A psychometric approach. Education Sciences, 13(4), 358. https://doi.org/10.3390/educsci13040358
8. Ayoobzadeh, M. (2023). Peer mentoring and doctoral student retention: A longitudinal study. Higher Education Research & Development. https://doi.org/10.1080/07294360.2022.2106948
9. Belmekki, M. (2025). The learning, teaching, and assessment of critical thinking in higher education. The Journal of Quality in Education, 15(25), 95–113. https://doi.org/10.37870/joqie.v15i25.462
10. Brock, H., et al. (2025). Peer2Me – Impact of peer support on self-efficacy in young adult cancer survivors. BMC Cancer, 25, 14323. https://doi.org/10.1186/s12885-025-14323-5
11. Dost, G., Tuffley, D., & Vercoe, C. (2023). Understanding higher education students' sense of belonging from their perspectives. Teaching in Higher Education. https://doi.org/10.1080/0309877X.2023.2191176
12. Egele, E., & Stark, S. (2024). The mediating role of self-efficacy and outcome expectations in the relationship between peer context and academic engagement: A social cognitive theory perspective. Behavioral Sciences, 15(5), 681. https://doi.org/10.3390/bs15050681
13. Farhan, M. A., Makkiyah, F. A., Hadiwiardjo, Y. H., et al. (2025). Exploring the correlation between academic achievement and self-regulated learning on critical thinking in undergraduate medical students. BMC Medical Education, 25, 1587. https://doi.org/10.1186/s12909-025-07866-5
14. Gonçalves, J. C., Duarte, A. M., Marques Pinto, A., Paulino, P., Figueira, C. P., Ferreira, P. A., Hagá, S., Barros, A., Pereira, N. S., Da Luz, R. A., & Amaral, A. (2025). Mentoring for well-being, engagement,

and academic achievement in higher education students. Frontiers in Education. https://doi.org/10.3389/feduc.2025.1606103
15. Hibbs, A., & Smith, J. (2025). Self-confidence and perceived importance of pre-arrival experiences among first-year students. Journal of Further and Higher Education. https://doi.org/10.1016/j.jhef.2025.02.001
16. Hofmans, L., & van den Bos, W. (2022). Social learning across adolescence: A Bayesian neurocognitive perspective. Developmental Cognitive Neuroscience, 58, 101151. https://doi.org/10.1016/j.dcn.2022.101151
17. Idris, M. H. S., & Johari, K. S. (2024). Perception and self-efficacy of students in the peer mentoring program (PRS). International Journal of Academic Research in Business and Social Sciences, 14(6), 217–230. https://doi.org/10.6007/IJARBSS/v14-i6/21778
18. Ikmal, M., Sallehatul, A., Intan, I., Mohd, F., & Hardiyanti, Z. (2025). The educational challenges among private university students in Klang Valley area during the pandemic. *International Journal of Advanced Computer Science and Applications*, 11(6), 1–10.
19. Ikmal, M., & Grace, D. (2023). The challenges of educational environment on virtual learning among undergraduate students during the Covid-19 pandemic. *International Journal of Academic Research in Progressive Education and Development*, 12(2), 662–675. https://doi.org/10.6007/IJARPED/v12-i2/16884
20. Kenney, T., & O'Halloran, K. C. (2024). The impact of student satisfaction and sense of belongingness on academic success and performance in undergraduate science majors. Journal of Interdisciplinary Studies in Education, 14(2), 90–114. https://doi.org/10.32674/v7gyzx59
21. Krishna, L. K. R., Kwok, H. Y. F., Ravindran, N., et al. (2024). A systematic scoping review of mentoring support on professional identity formation. BMC Medical Education, 24, 1380. https://doi.org/10.1186/s12909-024-06357-3
22. Le, H. G., & Sok, C. (2024). The benefits of peer mentoring in higher education: Findings from a systematic review. Journal of Learning Development in Higher Education, (31).
23. Lefferts Mohn, L. (2023). Applying social learning theory in higher education mentoring programs: A conceptual review. Journal of Educational Research and Practice, 13(7), 112–130. https://doi.org/10.5590/JERP.2023.13.7.09
24. Lestari, A. D. P., & Antika, E. R. (2023). Self-esteem and peer social support: How do they contribute to high school students' academic hardiness? Pamomong: Journal of Islamic Educational Counseling, 4(2), 106–121. https://doi.org/10.18326/pamomong.v4i2.606
25. Liu, T., Pang, P. C. I., & Lam, C. K. (2024). Public health education using social learning theory: A systematic scoping review. BMC Public Health, 24, 1906. https://doi.org/10.1186/s12889-024-19333-9
26. López, M. M., Verdugo, M. Á., & Fornés, J. M. (2024). Social integration, subjective well-being, and dropout intention: A predictive model in higher education. Revista de Psicología.
27. López, E. F., Huerta, A. H., Torres, G. M., et al. (2025). Mentorship and outreach: Exploring students' feedback to improve Men of Color retention programs. Innovative Higher Education. https://doi.org/10.1007/s10755-025-09793-1
28. Maluenda Albornoz, J., Berríos Riquelme, J., Infante Villagrán, V., & Lobos Peña, K. (2023). Perceived social support and engagement in first-year students: The mediating role of belonging during COVID-19. Sustainability, 15(1), 597. https://doi.org/10.3390/su15010597
29. Marzoratti, A., & Evans, T. M. (2024). Why and how to collect representative study samples in educational neuroscience research. Trends in Neuroscience and Education, 35, 100231. https://doi.org/10.1016/j.tine.2024.100231
30. Naidoo, K., Plummer, L., McKean, M., Mack, A., Bowdle, G. K., Mullins, M. A., & Gore, S. (2022). Virtual faculty and peer mentoring to promote social belonging among minoritized physical therapist and nursing students. Healthcare, 10(3), 416. https://doi.org/10.3390/healthcare10030416
31. Nallaluthan, K., Kamaruddin, S., Thurasamy, R., Ghouri, A. M., &Kanapathy, K. (2024). Quantitative data analysis using PLS-SEM (SmartPLS): Issues and challenges in ethical consideration. International Business Education Journal, 17(2), 41–54. https://doi.org/10.37134/ibej.Vol17.2.04.2024
32. Ni, J., Shi, Y., Sun, J., & Wu, Q. (2024). The effect of self-esteem on college students' learning adaptation: A chain mediation analysis of self-efficacy and learning burnout. Asia-Pacific Education Researcher, 34(5), 1321–1330. https://doi.org/10.1007/s40299-024-00945-z

33. Pereira, L. M., Rodrigues, V. S., & Freires, F. G. M. (2024). Use of partial least squares structural equation modeling (PLS SEM) to improve plastic waste management. Applied Sciences, 14(2), 628. https://doi.org/10.3390/app14020628
34. Pinkney, J. (2024). A case study of the intersections of peer mentoring at a Hispanic-serving institution: Implications for transfer students. Online Journal of Distance Education and e-Learning, 12(2), 1–14.
35. Prummer, M., & Kogler, M. (2024). The role of mentoring in developing leaders' emotional competencies. Frontiers in Education, 9, 1393660. https://doi.org/10.3389/feduc.2024.1393660
36. Riley, E. D., Chur, E., Gandhi, M., et al. (2024). Lessons for expanding virtual mentoring in academic medical institutions: A qualitative study among senior mentors. BMC Medical Education, 24, 934. https://doi.org/10.1186/s12909-024-05852-x
37. Salman, H. D., Mahdad, A., Khalifa Al Hashmy, R. N., &Manshaee, G. (2024). Predicting students' academic performance based on academic self-concept, academic resilience, academic engagement, emotional self-regulation, and self-esteem. Journal of Adolescent and Youth Psychological Studies, 5(12), 31–40. https://doi.org/10.61838/kman.jayps.5.12.4
38. Sá, M. J. (2023). Student academic and social engagement in the life of the academy—a lever for retention and persistence in higher education. Education Sciences, 13(3), 269. https://doi.org/10.3390/educsci13030269
39. Sedigh, A., et al. (2024). The effect of a peer mentoring program on clinical academic progress, self-confidence, and stress among operating room students. BMC Medical Education, 24(1), 542. https://doi.org/10.1186/s12909-024-05424-z
40. Subhaktiyasa, P. G. (2024). PLS SEM for multivariate analysis: A practical guide to educational research using SmartPLS. EduLine: Journal of Education and Learning Innovation, 4(3), 353–365. https://doi.org/10.35877/454RI.eduline2861
41. Sun, T. (2025). Exploring key factors in mentoring relationships in Malaysian higher education institutions: A case study of Universiti Teknologi Malaysia. International Journal of Academic Research in Progressive Education and Development, 14(1), 2464–2480. https://doi.org/10.6007/IJARPED/v14-i1/25027
42. Torres, J., Chen, D., & Peixoto, B. (2025). Effect of peer mentoring programs on academic motivation and school belonging among first-generation learners. KMAN Counseling& Psychology Nexus, 3, 1–10. https://doi.org/10.61838/kman.ec.psynexus.3.7
43. Versteeg, M., Kappe, R. F., & Knuiman, C. (2022). Predicting student engagement: The role of academic belonging, social integration, and resilience during COVID-19 emergency remote teaching. Frontiers in Public Health, 10, 849594. https://doi.org/10.3389/fpubh.2022.849594
44. Williams, C. J., Chen, J. M., Quirion, A., & Hoeft, F. (2024). Peer mentoring for students with learning disabilities: The importance of shared experience on students' social and emotional development. Frontiers in Education, 9, 1292717. https://doi.org/10.3389/feduc.2024.1292717
45. Woreta, G. T., & Row, G. (2025). The mediating role of self-efficacy and outcome expectations in the relationship between peer academic norms and academic engagement. Behavioral Sciences, 15(5), 681. https://doi.org/10.3390/bs15050681
46. Yusof, K., Ahmad Shah, N., & Abdul Rauf, R. K. (2022). Fostering the academic performance of private university students through a mentoring programme. In H. H. Kamaruddin et al. (Eds.), Reimagining resilient sustainability 3, 438–452. European Proceedings of Multidisciplinary Sciences. https://doi.org/10.15405/epms.2022.10.43
47. Zhai, Y., & Carney, J. V. (2024). The role of mental health and protective factors in student academic persistence and retention during a global crisis. Global Mental Health, 11, e15. https://doi.org/10.1017/gmh.2024.12
48. Zhang, F., Xu, X., Peng, W., & Guo, C. (2024). Educational expectations and academic persistence among rural adolescents: The protective role of high self-esteem. Behavioral Sciences, 14(10), 888. https://doi.org/10.3390/bs14100888
49. Zhou, F., & Ahmad, R. A. H. (2025). The impact of learning motivation on students' academic performance: A self-determination theory perspective. Journal of Education, Humanities, and Social Research, 5(2), 36–40.