Student Engagement and School Well-Being in Vocational High School Students: The Role of Academic Self-Efficacy as A Mediator

Devi Jati Septyningtyas[1], Tri Na'imah[2], Retno Dwiyanti[3]

{devijatiseptyningtyas@gmail.com[1], trinaimah@ump.ac.id[2], retnodwiyanti@ump.ac.id[3]}

Faculty of Psychology, Universitas Muhammadiyah Purwokerto, Purwokerto, Indonesia[1,2,3]

Abstract. Low levels of student engagement, academic self-efficacy, and school well-being are prevalent among vocational students, which may hinder their academic success. This study aims to examine the effect of student engagement on school well-being, mediated by academic self-efficacy. Using a quantitative approach, data were collected from 118 11th-grade students at SMK Negeri 1 Purwokerto via validated Likert-scale instruments. Mediation regression analysis revealed that student engagement significantly predicts both academic self-efficacy ($t = 10.791$, $p < 0.001$, $R^2 = 0.708$) and school well-being ($t = 7.392$, $p < 0.001$, $R^2 = 0.566$). Academic self-efficacy also significantly affects school well-being ($t = 10.830$, $p < 0.001$, $R^2 = 0.709$), whereas the direct effect of student engagement on school well-being was not significant ($t = 1.389$, $p = 0.167$). These results indicate that academic self-efficacy mediates the relationship between student engagement and school well-being. The findings suggest that fostering student engagement and self-efficacy through supportive learning environments and psychological interventions is crucial to enhancing students' school well-being.

Keywords: Academic Self-efficacy; School Well-being; Senior High School Students; Student Engagement

1 Introduction

Schools play a critical role in adolescent development by shaping identity, self-esteem, social interactions, moral reasoning, and students' understanding of social systems [1, 2]. Understanding the factors that influence students' experiences and perceptions of school is therefore essential for establishing strategies that support their holistic development and long-term success.

School well-being extends Allardt's [3] concept of well-being, which refers to the fulfillment of both material and non-material needs necessary for optimal functioning. Konu and Rimpelä [4] further conceptualize school well-being as students' subjective evaluation of their school environment, consisting of four key dimensions: having, loving, being, and health. These dimensions encompass school infrastructure, social relationships, opportunities for self-actualization, and the absence of illness caused by academic demands [7–10]. Together, they provide a comprehensive framework for understanding students' school experiences. Furlong

ISPsy 2025, May 29, Purwokerto, Indonesia

DOI 10.4108/eai.29-5-2025.2360817

et al. [5] highlight that unfavorable school conditions can provoke stress, boredom, alienation, loneliness, and depression, underscoring the importance of fostering environments that promote student well-being. Supporting school well-being can be achieved through various pathways, such as strengthening community support, promoting prosocial attitudes, ensuring safety, and cultivating meaningful and healthy learning environments [6]. In vocational school contexts, these aspects are strongly linked to students' levels of engagement, which may be further enhanced through academic self-efficacy.

Student engagement is one of the primary factors influencing school well-being. It involves students' focus, effort, participation, curiosity, and enthusiasm during learning activities [14, 15]. The construct originated from early work by Tyler (1969) and Pace (1984) and has since evolved into a multidimensional concept. Engagement includes both time and effort invested by students and the policies or practices implemented by educational institutions to encourage participation inside and outside the classroom [11, 17]. Fredericks et al. [20] classify engagement into three dimensions: behavioral, emotional, and cognitive. Behavioral engagement refers to attendance, adherence to school rules, and active participation [19, 22]; emotional engagement reflects students' feelings toward teachers, peers, and the learning environment [23]; while cognitive engagement involves motivation, effortful thinking, and autonomous goal-setting [24, 25]. These dimensions form an integrated framework for understanding how students interact with their learning environment and how these interactions may influence their school well-being.

Academic self-efficacy is another factor that may strengthen the relationship between student engagement and school well-being. Bandura [26] defines self-efficacy as a belief in one's ability to plan and execute actions required to achieve specific performance outcomes. Within educational settings, academic self-efficacy refers to students' confidence in completing tasks and achieving learning objectives [27–29]. Because it shapes motivation, persistence, and coping strategies, academic self-efficacy plays a key role in how engagement translates into academic and psychological benefits.

Students with high academic self-efficacy typically show greater persistence, effort, and resilience when facing academic challenges [30–33]. This confidence contributes to better academic performance and improves students' ability to manage academic demands, making it a vital psychological resource in education [34]. Moreover, strong academic self-efficacy supports students' emotional well-being by reducing stress and anxiety and enhancing their sense of competence [35, 36]. Student engagement not only directly contributes to school well-being by fostering belonging, satisfaction, and social support, but also indirectly enhances well-being through academic self-efficacy, which mediates the relationship by reinforcing positive beliefs and helping students cope with academic pressures [37, 38]. Therefore, academic self-efficacy serves as a crucial psychological bridge explaining how student engagement can more profoundly contribute to school well-being.

2 Literature Review

2.1 School Well-Being

School well-being broadly reflects students' overall experience in the school environment, covering physical, emotional, social, and psychological facets that promote their optimal growth. Konu and Rimpelä [4] proposed a model highlighting four key dimensions: 'having,' which involves access to physical resources and a supportive, safe, and comfortable environment; 'loving,' referring to positive social relationships with peers and teachers that foster mutual support and acceptance; 'being,' which includes opportunities for self-expression, feeling valued, and engaging actively in school activities to support identity and autonomy; and 'health,' encompassing both physical and mental well-being, including feeling healthy and stress-free. They stress that school well-being results from the dynamic interaction of individual qualities and a supportive school setting, which can boost motivation, achievement, and overall quality of life. Consequently, school well-being extends beyond physical or academic factors, integrating social and emotional elements essential for students' comprehensive development.

2.2 Student engagement

Student engagement refers to the extent to which students actively participate in the learning process at behavioral, emotional, and cognitive levels. It reflects the quality of their involvement in academic activities and their connection to the school environment. Fredricks, Blumenfeld, and Paris [39] conceptualize student engagement as a multidimensional construct consisting of three core components. Behavioral engagement includes students' observable participation in school activities, such as attending classes, completing assignments, and contributing to discussions or extracurricular programs. Emotional engagement involves students' affective reactions toward school, teachers, and peers, where positive emotions—such as enthusiasm, comfort, and a sense of belonging—enhance motivation, while negative emotions—such as anxiety or alienation—can undermine well-being and participation. Cognitive engagement represents a deeper mental investment in learning, including the use of advanced learning strategies, conceptual understanding, and persistence in the face of academic challenges. These three dimensions are interrelated and serve as key indicators of students' academic success, motivation, and overall well-being [39]. Promoting balanced behavioral, emotional, and cognitive engagement can therefore support more meaningful and sustainable learning experiences for students.

2.3 Academic self-efficacy

According to Sagone and Caroli [40], academic self-efficacy refers to students' confidence in their ability to manage academic tasks and achieve learning goals. Acting as a mediator between student engagement and school well-being, academic self-efficacy influences how students cope with academic challenges, regulate stress, and sustain motivation. Sagone and Caroli [40] identify four key components that shape students' academic self-efficacy. The first is self-engagement, which reflects students' active involvement in the learning process and their commitment to completing academic tasks. The second component is self-oriented decision-making, referring to students' ability to make independent choices related to their learning. The third, other-oriented problem-solving, involves students' capacity to resolve issues that arise in social and collaborative academic settings. The final component, interpersonal climate,

emphasizes the importance of supportive relationships with teachers and peers in fostering students' academic confidence. Together, these elements form a comprehensive structure of academic self-efficacy that influences how students overcome classroom challenges and achieve their learning goals. Strengthening these components can therefore enhance students' academic performance as well as their overall well-being at school.

3 Method

The method applied in this research is quantitative research. The independent variable in this study is Student Engagement, the dependent variable in this study is School Well-being, and the mediator variable in this study is Academic Self-Efficacy. The research subjects consisted of 118 students of class XI, State Vocational High School 1 Purwokerto. The instrument used in this study was a student engagement scale based on SEM Mac Arthur. Fredricks et al., [20] developed by Zanira & Cahyadi [41], which amounted to 19 items. The reliability of the student engagement scale is 0.886.

The school well-being scale is based on aspects of school well-being. Konu & Rimpelä [4], which was later developed by Wahidah & Royanto (2019), which amounted to 32 items. The reliability of the school well-being scale is 0.853. The academic self-efficacy scale is based on aspects initiated by Sagone & Caroli [40], which was developed by Darmayanti et al., [43], which amounted to 25 items with a reliability of <0.70. The scale is arranged based on a Likert scale model with 5 alternative answers, namely: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

The data analysis used in this study is multiple regression analysis because it aims to determine much influence between variables on the dependent variable. Data analysis using the help of SPSS version 27.

4 Result

The demographic characteristics of the respondents in this study included age, gender, and grade level. Details of the distribution of respondents can be seen in Table 1.

Table 1. Demographic Characteristics of Respondents (n = 119)

Characteristics	Category	Frequency (n)	Percentage (%)
Age	15 years	4	3.4
	16 years	85	71.4
	17 years	30	25.2
Gender	Male	43	36.1
	Female	76	63.9

Based on Table 1, the majority of respondents were 16 years old (71.4%), followed by respondents aged 17 (25.2%) and 15 (3.4%). The gender composition shows that most

respondents were female (63.9%), while males accounted for 36.1%. All respondents were from grade 11 (100%). This characteristic indicates that the research sample was dominated by mid-adolescent students with a higher proportion of females, which could potentially influence student engagement levels, academic self-efficacy, and school well-being.

The results of this study begin with a descriptive analysis that outlines the frequency distribution and statistical characteristics of the main variables in this study. Table 1 below presents the minimum, maximum, mean, and standard deviation values for the Student Engagement, School Well-Being, and Academic Self-Efficacy variables.

Table 2. Descriptive Statistical Data

Variable	Min.	Max.	Mean	SD
Student Engagement	17	36	28	4
School Well-being	35	63	50	6
Academic Self-Efficacy	57	104	79	10

There are three research scales, namely, the Student Engagement Scale, School Well-being scale, and Academic Self-Efficacy Scale, with a minimum score of 1 and a maximum score of 4. The student engagement scale has 9 items, and statistical data shows a minimum value of 17, a maximum value of 36, a mean of 28, and a standard deviation of 4. The School Well-Being scale has 17 items with statistical data showing a minimum value of 35, a maximum value of 63, a mean of 50, and a standard deviation of 6. And the Academic Self-Efficacy scale has 27 items with statistical data showing a minimum value of 57, a maximum value of 104, a mean of 79, and a standard deviation of 10.

In addition to descriptive statistical analysis, this study also categorized the data into several categories to understand the distribution of scores on each variable. Table 2 below presents the percentage of respondents in the Very Low, Low, Medium, High, and Very High categories for the Student Engagement, School Well-Being, and Academic Self-Efficacy variables.

Table 3. Categorization Data

Variable	Category									
	Very Low		Low		Medium		High		Very High	
	n	%	N	%	N	%	n	%	n	%
Student Engagement	8	7%	28	24%	51	43%	25	21%	6	5%
School Well-being	9	8%	29	25%	44	37%	28	24%	8	7%
Academic Self-Efficacy	9	8%	25	21%	48	41%	29	25%	7	6%

Based on Table 2, there are 8 subjects have very low category student engagement (7%), 28 subjects have low category student engagement (24%), 51 subjects that have medium category student engagement (43%), 25 subjects that have high student engagement (21%), and 6 students have very high student engagement (5%). The categorization for the level of student school well-being is, there are 9 subjects have very low scholl well-being (8%), 29 subjects have low student engagement (25%), 44 subjects have moderate scholl well-being (37%), 28 subjects have high scholl well-being (24%), and 8 students have very high scholl well-being (7%). Also, there are 9 subjects having very low academic self-efficacy (8%), 25 subjects having low academic self-efficacy (21%), 48 subjects having moderate academic self-efficacy (41%), 29 subjects having high academic self-efficacy (25%), and 7 students having very high academic self-efficacy (6%).

The results of the data processing of the student engagement, school well-being, and academic self-efficacy scales show that grade XI students of SMK Negeri 1 Purwokerto tend to have student engagement, school well-being, and academic self-efficacy in the moderate to very high category.

Furthermore, this study conducted a simple regression test to analyze the influence of the main variables. Table 3 below presents the coefficient of determination (R^2), t-value, and significance (Sig) for the relationships between Student Engagement and Academic Self-Efficacy, Student Engagement and School Well-Being, and Academic Self-Efficacy and School Well-Being.

Table 4. Simple Regression Test

Variable	R^2	t	Sig
Student Engagement towards Academic Self-Efficacy	0,708	10,791	<0.001
Student Engagement towards School Well-being	0,566	7,392	<0.001
Academic Self-Efficacy towards School Well-being	0,709	10,830	<0.001

Student engagement is positively correlated with academic self-efficacy by 0.708 (t=10.791; p <0.001). The results show an R^2 value of 0.708, which means that academic self-efficacy is influenced by student involvement by 70.8%, and 29.2% is influenced by other variables.

Based on the table, it is known that student engagement has a significant effect on academic self-efficacy (t=7.392; p <0.001). The results also show an R^2 value of 0.566, which means that 56.6% of school well-being is influenced by student engagement and 43.4% is influenced by other variables.

Academic self-efficacy is also positively correlated with school well-being by 0.709 (t=10.830; p <0.001). The results show an R^2 value of 0.709, which means that school well-being is influenced by academic self-efficacy by 70.9%, and 29.1% is influenced by other variables. Therefore, it can be concluded that the proposed hypotheses 1, 2, and 3 are accepted.

Table 5. Multiple Regression Test

Variable	T	Sig.	R^2
Student Engagement	1.389	0.167	0.511
Academic Self-Efficacy	6.698	0.000	

Based on the results of data analysis, it shows that the size of the regression coefficient in the hypothesis model shows that academic self-efficacy has a direct effect on school well-being of 0.511 ($t = 6.698$; $p = 0.001$), and student engagement has no effect on school well-being ($t = 1.389$; $p = 0.167$). Academic self-efficacy significantly mediates the relationship between student engagement and school well-being.

Next, to determine the mediating role of academic self-efficacy in the relationship between student engagement and school well-being, a mediation test was conducted using the Sobel test. The results of the mediation test are presented in Table 6 below.

Table 6. Mediation Test

Pathway	Coefficient (β)	t-value	p-value	Description
Total Effect (SE → SWB, without mediator)	0.709	10.830	< 0.001	Significant
Direct Effect (SE → SWB, with mediator)	0.128	1.389	0.167	Not significant
Indirect Effect (SE → ASE → SWB, Sobel test)	0.437	5.690	< 0.001	Significant

The analysis shows that the model without a mediator produces a significant effect of student engagement on school well-being ($\beta = 0.709$, $t = 10.830$, $p < 0.001$). However, in the model with academic self-efficacy as a mediator, the direct effect becomes insignificant ($\beta = 0.128$, $t = 1.389$, $p = 0.167$), while the indirect effect remains significant ($\beta = 0.437$, $t = 5.690$, $p < 0.001$). These findings indicate that academic self-efficacy fully mediates the relationship between student engagement and school well-being. In other words, student engagement in learning contributes to improved school well-being primarily through strengthening students' academic beliefs about their abilities.

5 Discussion

The results of the simple regression analysis indicate a significant relationship between student engagement, academic self-efficacy, and school well-being. These findings provide important

insights into how students' involvement in learning and their confidence in academic abilities contribute to their overall well-being in the school environment.

The analysis shows that student engagement significantly influences academic self-efficacy, with an R^2 value of 0.708 ($t = 10.791$; $p < 0.001$). This means that 70.8% of the variance in academic self-efficacy is explained by student engagement, while the remaining 29.2% is influenced by factors not examined in this study. Students who are highly engaged—both academically and through extracurricular participation—tend to develop stronger confidence in their academic abilities. This aligns with previous research emphasizing that active engagement in the learning process is essential for strengthening academic self-efficacy, as positive learning experiences increase motivation and readiness to overcome academic challenges.

The results also reveal that student engagement significantly affects school well-being, with an R^2 value of 0.566 ($t = 7.392$; $p < 0.001$). Thus, student engagement explains 56.6% of the variance in school well-being. Students who are socially and academically involved are more likely to form strong peer relationships, feel a sense of belonging, and receive the support necessary to navigate social and academic difficulties [44]. Consequently, higher levels of engagement are associated with improved school well-being..

Furthermore, academic self-efficacy demonstrates a significant influence on school well-being, with an R^2 value of 0.709 ($t = 10.830$; $p < 0.001$), indicating that 70.9% of the variation in school well-being is explained by academic self-efficacy. Students with strong academic confidence tend to feel more comfortable in the classroom, experience lower academic anxiety, and maintain higher intrinsic motivation. Confidence in one's academic abilities enables students to manage academic challenges and reduces psychological distress, which ultimately enhances their overall well-being [45]. Thus, strengthening academic self-efficacy may serve as an effective strategy for improving students' school well-being.

The mediation analysis further demonstrates that academic self-efficacy mediates the relationship between student engagement and school well-being. While initial regression findings indicated that student engagement directly affects school well-being, the follow-up analysis shows that this direct effect becomes non-significant when academic self-efficacy is included as a mediating variable ($t = 1.389$; $p = 0.167$). In contrast, academic self-efficacy maintains a significant direct effect on school well-being ($R^2 = 0.511$; $t = 6.698$; $p < 0.001$). This suggests that student engagement enhances school well-being indirectly by strengthening academic self-efficacy rather than through direct influence alone [38, 46]. Students who actively participate in learning develop greater confidence in their academic capabilities, which in turn contributes to improved psychological comfort and well-being in the school environment [37]. These findings support the theoretical view that self-efficacy functions as a psychological mechanism linking academic experiences to students' well-being.

Overall, the study supports all three proposed hypotheses: (1) student engagement significantly affects academic self-efficacy; (2) student engagement significantly affects school well-being; and (3) academic self-efficacy significantly affects school well-being and mediates the relationship between engagement and well-being. These findings highlight important implications for educational practice. Educators should implement strategies that enhance student engagement, such as creating supportive learning environments, facilitating active participation, and fostering confidence in students' academic abilities. Strengthening academic self-efficacy through targeted interventions may also be a valuable approach to improving

students' well-being. Guidance and counseling programs that focus on building academic self-efficacy can help students manage academic obstacles more effectively and enhance their overall learning experience.

Finally, the study opens avenues for future research to explore additional variables—such as social factors, family environment, and other psychological constructs—that may influence the interplay between student engagement, academic self-efficacy, and school well-being. A deeper understanding of these factors can contribute to improving the overall quality of education and supporting students' holistic development.

6 Conclusion

The findings of this study indicate that student engagement has a significant positive effect on both academic self-efficacy and school well-being. When students are actively involved in academic and extracurricular activities, their confidence in their academic abilities increases, and they experience greater well-being at school. Active participation also helps students build meaningful social relationships, develop a sense of belonging, and access the support needed to navigate academic and social challenges.

Academic self-efficacy also plays a crucial role in enhancing school well-being. Students with strong confidence in their academic capabilities tend to be more motivated, experience lower levels of academic stress, and feel more comfortable in the school environment. The study further reveals that academic self-efficacy mediates the relationship between student engagement and school well-being. This suggests that engagement enhances school well-being indirectly by strengthening students' academic confidence rather than through direct influence alone.

These findings offer important implications for educational practice. Educators and school practitioners should implement strategies that foster student engagement—such as creating supportive learning environments, providing opportunities for active participation, and strengthening students' confidence in their academic abilities. Interventions targeting academic self-efficacy may also serve as an effective approach for improving students' overall well-being at school. Finally, this study opens avenues for future research to explore additional factors—such as social conditions, family environment, and other psychological variables—that may influence the relationship between student engagement, academic self-efficacy, and school well-being. A deeper understanding of these elements can contribute to improving the overall quality of educational experiences and student well-being in school settings.

References

[1] Prodan G, Chiș-Toia D. Is School Education The Most Important Factor In Children's Personality Development? Proc 10th Int Conf Educ Reflection, Dev (ERD 2022), 24 June 2022, Cluj-Napoca, Rom. 2023;6:646–59.

[2] Poorzamani A. The relationship between family functioning, self-identification, and mental health of female high school students in Karaj. Univ y Soc. 2020;12(4):234–9.

[3] Allardt E. Experiences from the Comparative Scandinavian Welfare Study, with a Bibliography of

the Project. Eur J Polit Res. 1981 Mar;9(1):101–11.
[4] Konu A, Rimpelä M. Well-being in schools: A conceptual model. Health Promot Int. 2002;17(1):79–87.
[5] Furlong M, Smith DC, Springer T, Dowdy E. Bored with school! Bored with life? Well-being characteristics associated with a school boredom mindset. J Posit Sch Psychol. 2021;5(1):42–64.
[6] Gimbert BG, Miller D, Herman E, Breedlove M, Molina CE. Social Emotional Learning in Schools: The Importance of Educator Competence. Vol. 18, Journal of Research on Leadership Education. 2023. 3–39 p.
[7] Lathifah N, Adi AH, Na'imah T. An Overview of School Well-Being Scale at Students of Muhammadiyah Vocational High School: A Pilot Study. Proc Ser Soc Sci Humanit. 2021;2:97–104.
[8] Farrugia D. Social relations within the School and Home Environment: The Impact on Student Health and Achievement. Malta Leadersh Inst. 2022;(July).
[9] Dewi I, Purnamasari A, Rahma A. School Well-Being Dan Dukungan Sosial terhadap Kecenderungan Perundungan di Pesantren. Intuisi J Psikol Ilm. 2021;13(1):100–10.
[10] Rahma U, Faizah F, Dara YP, Wafiyyah N. Bagaimana meningkatkan school well-being? Memahami peran school connectedness pada siswa SMA. J Ilm Psikol Terap. 2020;8(1):58.
[11] Bond M. Facilitating student engagement through the flipped learning approach in K-12: A systematic review. Comput Educ. 2020;151.
[12] Tyler WR. Educational Evaluation: New Roles, New Means. NSSE; 1969. (Educational Evaluation: New Roles, New Means).
[13] Pace C. Measuring the Quality of College Student Experiences. An Account of the Development and Use of the College Student Experiences Questionnaire. In 1984.
[14] Singh M, James PS, Paul H, Bolar K. Impact of cognitive-behavioral motivation on student engagement. Heliyon. 2022;8(7):e09843.
[15] Ahmadi G, Mohammadi A, Asadzandi S, Shah M, Mojtahedzadeh R. What Are the Indicators of Student Engagement in Learning Management Systems? A Systematized Review of the Literature. Int Rev Res Open Distrib Learn. 2023;24(1):117–36.
[16] Ginting D. Student Engagement and Factors Affecting Active Learning in English Language Teaching. VELES Voices English Lang Educ Soc. 2021;5(2):215–28.
[17] Yang D, Wang H, Metwally AHS, Huang R. Student engagement during emergency remote teaching: A scoping review. Smart Learn Environ [Internet]. 2023;10(1). Available from: https://doi.org/10.1186/s40561-023-00240-2
[18] Skinner EA, Pitzer JR, Steele JS. Can student engagement serve as a motivational resource for academic coping, persistence, and learning during late elementary and early middle school? Dev Psychol. 2016 Dec;52(12):2099–117.
[19] Uden J, Ritzen H, Pieters J. Engaging Students: The Role of Teacher Beliefs and Interpersonal Teacher Behavior in Fostering Student Engagement in Vocational Education. Teach Teach Educ. 2014 Jan;37:21–32.
[20] Fredericks JA, Blumenfeld PC, Friedel J, Paris A. School engagement. In K. A. Moore and L. Lippman (Eds.), What do children need to flourish?: conceptualizing and measuring indicators of positive development. In: Springer. 2005. p. 305–21.
[21] Anggelika KF. Social support, self-regulated learning, and student engagement in high school students. Int J Res Publ. 2019;43 No 1(51):1–9.
[22] Giang TTT, Andre J, Lan HH. Student Engagement: Validating a Model to Unify In-Class and Out-of-Class Contexts. SAGE Open. 2022;12(4).

[23] Hagenauer G, Raufelder D, Ivanova M, Bach A, Ittner D. The quality of social relationships with students, mentor teachers, and fellow student teachers and their role in the development of student teachers' emotions in the practicum. Eur J Psychol Educ. 2024;(May).
[24] Liu Y. The role of peer relationships in adolescents' psychological well-being. SHS Web Conf. 2023;180:03027.
[25] Sesmiyanti. Student's Cognitive Engagement in the Learning Process. J Polingua Sci J Linguist Lit Educ. 2018;5(2):48–51.
[26] Bandura A. Social Learning Theory. New York: General Learning Press; 1977.
[27] Bhati K, Baral R, Meher V. Academic Self-Efficacy and Academic Performance among Undergraduate Students in Relation to Gender and Streams of Education. Indones J Contemp Educ. 2022;4(2):80–8.
[28] Akomolafe MJ, Ogunmakin AO, Fasooto GM. The Role of Academic Self-Efficacy, Academic Motivation, and Academic Self-Concept in Predicting Secondary School Students' Academic Performance. J Educ Soc Res. 2013;(February).
[29] Filippou K. Students' Academic Self-efficacy in International Master's Degree Programs in Finnish Universities. Int J Teach Learn High Educ [Internet]. 2019;31(1):86–95. Available from: http://www.isetl.org/ijtlhe/
[30] Meng Q, Jia W. Influence of psychological hardiness on academic achievement of university students: The mediating effect of academic engagement. Work. 2023;74(4):1515–25.
[31] Fakhrou A, Habib LH. The Relationship between Academic Self-efficacy and Academic Achievement in Students of the Department of Special Education. Int J High Educ. 2021;11(2):1.
[32] Honicke T, Broadbent J, Fuller-Tyszkiewicz M. The self-efficacy and academic performance reciprocal relationship: the influence of task difficulty and baseline achievement on learner trajectory. High Educ Res Dev. 2023;42(8):1936–53.
[33] Hayat AA, Shateri K, Amini M, Shokrpour N. Relationships between academic self-efficacy, learning-related emotions, and metacognitive learning strategies with academic performance in medical students: A structural equation model. BMC Med Educ. 2020;20(1):1–11.
[34] Malik AI, Batool R, Tabassum S. Academic Self-Efficacy, Academic Motivation and Coping Skills in Academia: A Cross-Sectional Exploration. Pakistan J Humanit Soc Sci. 2024;12(1):573–80.
[35] Bandura A. Social foundations of thought and action: A social cognitive theory. Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ, US: Prentice-Hall, Inc., 1986. xiii, 617–xiii, 617. (Prentice-Hall series in social learning theory.).
[36] Kristensen SM, Larsen TMB, Urke HB, Danielsen AG. Academic Stress, Academic Self-efficacy, and Psychological Distress: A Moderated Mediation of Within-person Effects. J Youth Adolesc. 2023;52(7):1512–29.
[37] Wang Y, Zhang W. The relationship between college students' learning engagement and academic self-efficacy: a moderated mediation model. Front Psychol. 2024;15(September):1–11.
[38] Xu B. Mediating role of academic self-efficacy and academic emotions in the relationship between teacher support and academic achievement. Sci Rep. 2024;14(1):1–13.
[39] Fredricks AJ, Blumenfeld CP, Paris HA. School Engagement: Potential of the Concept, State of the Evidence. Rev Educ Res. 2004;74(1):59–109.
[40] Sagone E, Caroli ME De. Locus of Control and Academic Self-efficacy in University Students: The Effects of Self-concepts. Procedia - Soc Behav Sci. 2014;114(January):222–8.
[41] Zanira D, Cahyadi S. Adaptation of School Engagement Measurement-MacArthur (SEM) Indonesian Version in the Context of Distance Learning. Guid J Ilmu Pendidikan, Psikologi, Bimbing dan Konseling. 2021;11(2):97–107.

[42] Wahidah NRF, Royanto LRM. Peran Kegigihan Dalam Hubungan Growth Mindset Dan School Well-Being Siswa Sekolah Menengah. J Psikol Talent. 2019;4(2):133.

[43] Darmayanti KKH, Anggraini E, Winata EY, Mardianto MFF. Confirmatory Factor Analysis of the Academic Self-Efficacy Scale: An Indonesian Version. J Pengukuran Psikol dan Pendidik Indones. 2021;10(2):118–32.

[44] Rahman S, Fauziyyah DM, Utari NSN, Sihotang VP. Self Concept, Student Engagement Dan School Well-Being Pada Pembelajaran Jarak Jauh. J Psikol Wijaya Putra. 2022;3(1):9–19.

[45] Raimondi G, Dawe J, Alivernini F, Manganelli S, Diotaiuti P, Mandolesi L, et al. Self-Efficacy and Psychological Well-Being in Adolescents: Evaluating the Moderating Role of Socioeconomic Status and Cultural Factors. Pediatr Rep. 2025;17(2):1–13.

[46] Hong JC, Zhang HL, Ye JH, Ye JN. The effects of academic self-efficacy on vocational students' behavioral engagement at school and at firm internships: A model of engagement-value of achievement motivation. Educ Sci. 2021;11(8).