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Pengaruh Locus of Control dan Technological Self-Efficacy Terhadap Hasil Belajar Siswa SMA Negeri Di Kota Bandung

The Impact of Locus of Control and Technological Self-Efficacy in Learning Outcomes of Public High School Students in Bandung City

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Abstrak

Penelitian ini menginvestigasi pengaruh locus of control dan technological self-efficacy terhadap hasil belajar siswa SMA Negeri di Kota Bandung dengan total responden sebanyak 312 siswa. Metode analisis deskriptif dan korelasional digunakan untuk menganalisis data yang dikumpulkan melalui kuesioner. Hasil penelitian menunjukkan bahwa tingkat locus of control dan technological self-efficacy siswa berada pada tingkat yang moderat. Lebih lanjut, penelitian ini mengungkapkan adanya hubungan positif antara locus of control dan technological self-efficacy dengan hasil belajar siswa. Implikasi temuan ini dapat memberikan kontribusi pada pemahaman faktor-faktor psikologis dan teknologis yang memengaruhi hasil belajar siswa SMA Negeri di Kota Bandung, serta memberikan dasar untuk perancangan strategi pembelajaran yang lebih efektif.
Kata Kunci: Hasil Belajar, Locus of Control, Tecnological Self-efficacy

Abstract

This research explores the impact of locus of control and technological self-efficacy on the academic performance of high school students in Bandung City, with a participant pool of 312 respondents. The data, collected through a questionnaire, underwent descriptive and correlational analysis. The results indicate that students' locus of control and technological self-efficacy levels are moderate. Moreover, the research reveals a positive and statistically significant relationship between locus of control, technological self-efficacy, and academic performance. These findings contribute to comprehending psychological and technological factors influencing high school student's academic achievement, offering insights for developing more effective learning strategies.
Keywords: *Learning Outcomes, Locus of Control, Technological Self-efficacy.*

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INTRODUCTION

High school student learning outcomes are essential for several reasons. Learning outcomes serve as benchmarks to measure students' success in absorbing lessons and as evaluation material for teachers in delivering learning material (Astuti, 2020). They can enhance teaching and learning in higher education by fostering student-centered learning. Learning outcomes also provide an alternative measure of graduates' quality and grades (Joakim *et al.*, 2018). They focus on learning outcomes as the primary educational goal to improve student outcomes, such as graduation, course pass, and college admission rates. However, there are obstacles to focusing on student learning outcomes, such as the

belief that learning should be normally distributed and that specifying outcomes diminishes the creative process (Jacqueline & Access, 2000). Despite these challenges, improving student learning outcomes is crucial for enhancing education and preparing students for their future.

Learning outcomes encompass three domains: cognitive, affective, and psychomotor. The cognitive domain focuses on knowledge acquisition and mental processes (Neal, 2023). The affective domain pertains to learners' beliefs, values, and interests, reflecting their emotional engagement and the psychomotor domain involves learning behavior achieved through neuromuscular motor activities. These domains provide a framework for educators to determine learning objectives and guide teaching and evaluation processes (Darwanto, 2022). The shift towards framing education regarding learners and their development rather than what is taught has emphasized learning outcomes (Gagné, 1972). While the cognitive domain is often the primary focus, it is essential to recognize and address the other domains to ensure holistic learning.

Based on preliminary research data obtained from high schools in Bandung City, issues related to student learning outcomes have been identified. The subsequent presentation, Figure 1, illustrates the average final year assessment scores for economics subjects in first-grade public high schools in Bandung City during the even semester of the 2021/2022 academic year.

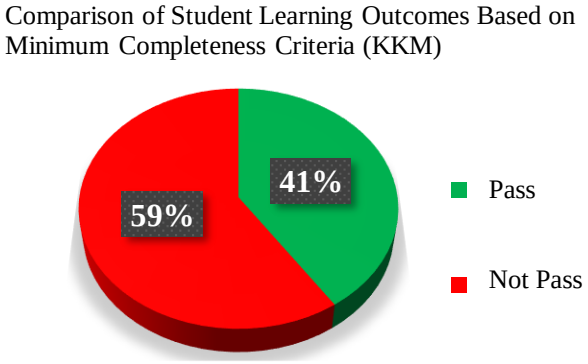

Figure 1. Student Learning Outcomes in Public High School in Bandung (First Grade)

The causes of problems with student learning outcomes can be attributed to various factors. Internal factors such as attitudes toward learning, interest, motivation, and learning concentration can influence the learning process and internalized outcomes (Rafidatul *et al.*, 2022). External factors, including the role of teachers as learning coaches and the availability of infrastructure and learning facilities, also play a significant role in student learning outcomes (Uldana & Baizyldayeva, 2020). Additionally, the involvement of students in social networks can distract them from necessary information for their professional and intellectual development, potentially impacting their academic performance (Yarmis *et al.*, 2019). Furthermore, students may experience learning problems related to learning skills, personal self, learning tools, and socio-emotional environment, which can be caused by factors originating from the students and the social environment (Atwell *et al.*, 2021).

Psychological factors such as locus of control and self-efficacy can influence students' cognitive learning outcomes. Locus of control refers to the belief that outcomes are contingent on one's actions or external events. Self-efficacy is the belief in one's ability to succeed in specific situations or accomplish tasks. Research has shown that locus of control and self-efficacy significantly affect students' learning performance and academic achievement (Hermann & Mucke, 2023; Neha & Rajalakshmi, 2021). Internal locus of control and self-efficacy have been found to have positive and significant effects on learning outcomes. In contrast, the external locus of control has a positive but insignificant effect. Additionally, meta-cognition, the knowledge and cognition of cognitive processes, has been found to mediate the relationship between locus of control and self-efficacy. These psychological factors play essential roles in shaping students' cognitive learning outcomes.

Several research papers have studied the impact of locus of control on learning outcomes in public high school students. One study in the Northern Region of Ghana found that high school students had higher scores in external locus of control than internal locus of control beliefs. It was also found that the external locus of control was inversely related to test scores. In contrast, no relationship was found between internal locus of control beliefs and test scores (Mehboob *et al.*, 2020). Another study suggested that students who consistently achieve poor assessment results tend to develop an external locus of control, viewing events as controlled by luck, chance, or other external factors (Ziblim *et al.*, 2020). Additionally, research has shown that learners with an internal locus of control have better learning performance than those with an external locus of control (Syatriadin, 2017). These findings highlight the importance of locus of control in understanding learning outcomes in high school students.

Technological self-efficacy positively impacts learning outcomes in public high school students (Nargis *et al.*, 2020). Students with higher technological self-efficacy are more likely to succeed academically and demonstrate improved critical thinking skills (Rashi & Malik, 2023). Additionally, self-efficacy contributes to mathematics learning outcomes, suggesting that students' belief in using technology effectively can enhance their performance in specific subjects (Pratiwi *et al.*, 2018). Teachers must integrate technology into their teaching practices and support students to develop their technological self-efficacy (Uus *et al.*, 2019). By doing so, students can benefit from the positive effects of technology on their learning outcomes (Stephanie *et al.*, 2020).

However, there is limited research on the influence of locus of control and technological self-efficacy on learning outcomes. Several studies have examined the relationship between locus of control and self-efficacy with various outcomes. Research examining locus of control, self-efficacy, and learning outcomes has identified several weaknesses and provided recommendations for further research. Some studies have raised concerns about participant selection and description. Therefore, researchers are interested in researching the influence of locus of control and technological self-efficacy on student learning outcomes in public high schools in Bandung City, with a decent number of respondents and considering the lack of research and development related to this research in Indonesia.

RESEARCH METHODS

Method

This research adopts a quantitative approach through an explanatory survey method. Darwin (2021) defines an explanatory survey as a research method that elucidates the relationship between two variables concerning situations and phenomena, utilizing questionnaires as the primary data collection tool. The explanatory survey method is employed in this study to expound upon the relationship between locus of control and technological self-efficacy as independent variables and learning outcomes as the dependent variable. The hypotheses formulated for this research are as follows:

1. Locus of Control influences Learning Outcomes.
2. Technological Self-efficacy influences Learning Outcomes.

Research Population

The population under investigation in this study comprises first-grade students at Public High Schools in Bandung City. The researcher undertook this study based on the identified issue of low learning outcomes. In this research, a distinction is made between the general population and the target population. The research problem defines the target population, as highlighted by Sinaga (2014). While the general population for this research encompasses all students of Bandung City Public High Schools, the specified target population is limited to First Grade in Social Science students at Public High Schools in Bandung City. To align with the research objectives and address the research problem, the researcher selected the target population from each school based on the lowest average scores in the end-of-year PAT (Performance Assessment Test) in each region. The details of the target population for this research are presented in Table 1.

Table 1. Population Data

Region	Public High School	Students (First Grade)
A	SMAN 19 Bandung	322
B	SMAN 10 Bandung	98
C	SMAN 7 Bandung	138
D	SMAN 11 Bandung	178
E	SMAN 17 Bandung	141
F	SMAN 9 Bandung	165
G	SMAN 16 Bandung	214
H	SMAN 26 Bandung	167
Total		**1.423**

Source: Economics teacher at a public high school in Bandung City

Research Sample

The sample is part of the population that will be selected for research purposes due to practical considerations. The sample size is inherently more petite than the entire population (Darwin, 2021). *Sampling* is a strategic research technique enabling researchers to gather information about a population by studying a subset of individuals. Information derived from the sample is then used to estimate population parameters, such as mean, standard deviation, frequency, percentage, and correlation.

In this research, the researcher opted for purposive sampling. Considering the student population of Bandung City Public High School first grade for the 2021/2022 academic year, the targeted population was identified as 1423 students. The sample size for this study was determined to be 312

students, calculated using the formula for proportional allocation sample size as outlined by Riduwan and Kuncoro (2012).

Research Instrument

The research instrument employed for data collection was a questionnaire systematically divided into three parts. Part A encompassed personal information about the respondents, while Part B focused on the students' opinions regarding the locus of control. Part C provided a comprehensive depiction of technological self-efficacy during the learning process for students. The questions within Part B and Part C utilized a Likert scale. As articulated by Sugiono (2013), the Likert scale constitutes questions that elicit feedback from respondents through a questionnaire, utilizing a scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The Likert scale serves the dual purpose of facilitating respondents' expression of their views within the questionnaire and assisting researchers in obtaining more precise information. Taherdoost (2019) highlights the Likert scale's ease of creation and high probability of producing a reliable scale.

Data analysis

Descriptive and correlation analysis methods were used to analyze the data collected from primary sources (questionnaires). The data underwent analysis utilizing Statistical Processes for Social Sciences (SPSS) software version 25 to attain comprehensive research results. The conducted data analysis encompassed reliability, demographic, descriptive, and conclusion analyses.

Julian Rotter (1966) describe Locus of Control (LoC) scale, a foundational psychological measure, is structured around two primary dimensions: (1) internal locus of control and (2) external locus of control. The internal locus of control signifies the degree to which individuals believe they can shape the outcomes of their lives through personal actions and decisions. Those with a high internal locus of control attribute their successes and failures to their efforts and choices. Conversely, the external locus of control reflects the belief that external factors, such as luck, fate, or the influence of others, predominantly determine life events. Rotter's scale provides valuable insights into individuals' fundamental perceptions of control over their lives. It offers a dichotomy between those who feel empowered by their actions and those who view external forces as more influential in shaping their destinies. The Julian Rotter's Locus of Control (LoC) scale, a fundamental psychological measure, incorporates six key indicators that shed light on individuals' perceptions of control over their lives: (1) Self-confidence, (2) Optimism, (3) Experience, (4) Hard Work, (5) Belief in Fate, and (6) Rationality.

The measuring instrument for technological self-efficacy variables, as described by Compeau and Higgins (1995), includes (1) magnitude, (2) strength, and (3) generalizability. The magnitude dimension refers to the level of capability expected in computer use. The second dimension, strength, claims to be the level of confidence to assess one's ability to complete computational tasks well. Third, generalizability is the level of one's judgment limited to a specific domain of activity, meaning that with different hardware and software configurations, someone with a high level of generalizability can use a variety of system packages quite well.

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RESULTS AND DISCUSSION

Results

This research involved 312 participants, mostly females (55.3%) and males (44.7%). The normality test results for the locus of control and technological self-efficacy variables indicate that the data is usually distributed as the significance is p>0.05. The correlation test in this study used the Pearson Product Moment correlation test. The correlation test was conducted to verify whether there is a relationship between the locus of control variable and technological self-efficacy in learning outcomes.

(a) General Description of Respondents

Table 2. General Description of Respondents

		Frekuensi	Persentase (%)
Gender	Male	139	44.7
	Female	172	55.3
Parental Education	Perguruan Tinggi	97	9
	SMA	160	51.2
	SMP	28	9
	SD	27	8.8
School	SMAN 7	37	11.9
	SMAN 9	21	6.7
	SMAN 10	30	9.6
	SMAN 11	39	12.5
	SMAN 16	31	9.9
	SMAN 17	36	11.5
	SMAN 19	47	15.1
	SMAN 26	71	22.8
Able to use the Internet Access	Yes	273	87.6
	No	39	12.4
Able to use Technology Learning Facility (Smartphone, Laptop, etc)	Yes	270	86.8
	No	42	13.2

(b) Descriptive Analysis

Table 3. Descriptive Analysis

Variabel	N	Mean	Standard Deviation	Rate
Self-confidence	312	21.79	3.382	High
Optimism	312	14.40	2.484	Moderate
Experience	312	13.05	2.626	Moderate
Hard Work	312	14.46	2.383	Moderate
Belief in Fate	312	14.31	2.198	Moderate

Rationality	312	7.38	1.254	Low
Magnitude	312	22.19	3.684	High
Strength	312	13.75	2.832	Moderate
Generality	312	13.77	2.703	Moderate

Based on Table 3, the mean value for all variables used ranges from 7.38 to 22.19, with different levels of variation. In contrast, the standard deviation ranges from 1,254 to 3,684, which shows a relatively high distribution of data variations. Thus, the level of locus of control for public high school students in Bandung City is moderate (on average), with the highest indicator being self-confidence and the lowest hand being rationality. As for the level of technological self-efficacy, on average, it has a moderate level, with the magnitude indicator being a high-level indicator and strength and generality at an intermediate level. Students' locus of control and technological self-efficacy, as measured using predetermined questionnaires and scales, generally have a moderate level for each variable.

(c) Correlation Analysis

Table 4 shows the results of the influence of the independent variable on the dependent variable. The test results are simple and moderate, but the relationship has a statistically positive impact between all dimensions of the independent and dependent variables. The correlation coefficient value of Spearman's rho on learning outcomes can be seen in Table 4.

Tabel 4. Correlation Test Results between Locus of Control and technological self-efficacy Variables with Learning Outcome Variables

Variabel		*Learning Outcomes*	
		rs	*P*
Locus of Control	*Self-confidence*	.394**	.000
	Optimism	.346**	.000
	Experience	.403**	.000
	Hard Work	.417**	.000
	Belief in Fate	.328**	.000
	Rationality	.303**	.000
TSE	*Magnitude*	.295**	.000
	Strength	.306**	.000
	Generality	.327**	.000

**. p<0,01

Based on the results in Table 4, a positive relationship exists between locus of control and technological self-efficacy on learning outcome variables. The correlation obtained in this study illustrates a good correlation between the total score of the variables locus of control and technical self-efficacy and the level of learning outcomes of State High School students in Bandung City. It can be concluded that there is a positive relationship between the independent variable and the dependent variable. This means that the higher the level of locus of control or perception of students' self-control over their learning process internally and externally, the higher the level of learning outcomes, and the higher the level of technological self-efficacy or students' self-confidence in using computers in their learning experience, the greater the influence on the student's learning outcomes. Thus, the results of the assumptions and questions in this research meet predictions.

Discussion

The results of this study align with previous research (Arinanda et al., 2021; Drago et al., 2018; Joo et al., 2013). There is a positive relationship between locus of control and learning outcomes in a sample of students where students who have a high level of control over their actions can have a good level of learning outcomes and have strength when dealing with academic difficulties faced. The research conducted by Kurniawati and Liana (2022) found a relationship between locus of control and learning outcomes in students using a descriptive correlational approach with an influence level of 37%. The results of this study indicate the effect of construct linkage between locus of control and learning outcomes in various samples.

According to Maulana (2018), researching the problem of student learning outcomes in Bandung City found that students need more confidence in their learning goals and achievements and are less active in learning. This is in line with research conducted by Millenia & Taufik (2023), who examined the relationship between locus of control and low student learning outcomes, finding that, in general, students who have low scores tend to believe in their capacity and ability or in the sense of having a higher level of locus of control, especially the internal domain. Attributed to internal influences, students with high levels of locus of control tend to have high prosocial behavior (Dhila et al., 2023). This can imply that locus of control influences student actions from internal and external perspectives.

In a study conducted by Syatriadin (2017), who examined the locus of control using Julian Rotter's locus of control scale, dissected each indicator and found that all personal indicators, including self-confidence, optimism, experience, hard work, belief in fate, and rationality, have a positive influence on the student learning process. This is in line with Herawati's research (2018), which analyzed the factors and effects of locus of control and found that the output or learning outcomes can be determined by several indicators in the locus of the control variable. Therefore, the researcher concluded that locus of control with a construct based on six indicators of Julian Rotter's locus of control scale positively influences student academic outcomes.

The results of Leomar and Garcia's research (2023) state a significant relationship between high levels of technological self-efficacy and high school students' learning outcomes during the blended learning period. Technology plays an important role in changes in education; according to Saville & Foster (2021), the use of technology is a new adaptation for students; students with a high level of technological ability will be able to adapt to technology in education. Another study on a sample of university students that examined the effect of technological self-efficacy on learning motivation and learning achievement found a positive effect with the finding that students with high levels of technological self-efficacy can complete and are more motivated in facing their academic challenges so that it has implications for their learning achievement. Thus, the technological self-efficacy (TSE) variable in several studies shows that it positively affects student learning outcomes.

According to Lase (2019), the use of technology is believed to have a strong effect on the learning process, with one of the benchmarks being the level of technological mastery ability. The factor that is strongly suspected of influencing the level of student learning outcomes is the Technological Self-

Efficacy variable. In line with these findings, there are several studies conducted by (Fuhai et al., 2022; Jan 2015; Wang et al., 2013) found that students with high levels of technological self-efficacy have a positive relationship to student learning outcomes and tend to have better final grades and are more satisfied with their learning experience.

Based on research conducted by Rahman (2023) on the effectiveness of online learning during COVID-19, he says students' ability and level of confidence in using technology have an important role. He has a positive effect on their learning outcomes. This is in line with the results of research conducted by researchers who found a positive relationship between technological self-efficacy (TSE) variables on student learning outcomes with a moderate level of influence category; researchers assume these results are moderate because they are aimed at students who are not in online learning but in offline learning.

CONCLUSION

This research aims to see the relationship between locus of control (LoC) and technological self-efficacy (TSE) on Learning Outcomes. With a population of public high school students in Bandung City, a sample of 312 respondents was obtained. The data obtained is used for quantitative reports in the form of frequency, percentage, mean, and standard deviation, and research reveals that locus of control has a positive influence on learning outcomes with a medium level of power; technology self-efficacy positively impacts student learning outcomes with a moderate level of impact. Moderate influence. Thus, the higher the locus of control in students with 6 indicators, including Self-confidence, Optimism, Experience, Hard Work, Belief in Fate, and Rationality, the more it will influence the learning outcomes. The higher the student's self-confidence in using technology or technological self-efficacy, the higher the student's learning outcomes will be.

REFERENCE

Atwell, Mrusek, Solti, Wilson. (2021). Risks to Student Achievement in Higher Education. *AHFE: Advance in Human Factors in Training, Education, and Learning Sciences* doi: 10.1007/978-3-030-80000-0_20

Arinanda, P., Fasari, Y., Utomo, S. W., & Styaningrum, F. (2021). Pengaruh Locus of Control Dan Motivasi Belajar Terhadap Hasil Belajar. JAMER: Jurnal Ilmu-Ilmu Akuntansi, 2(1), 39–42. http://mail.unmermadiun.ac.id/index.php/jamer/index

Astuti, P. (2020). Relationship Between Motivation and Discipline of Students to Student Learning Outcomes First GradeI Vocational High School. doi: 10.29240/EF.V4I1.951

Compeau, D., & Higgins, C. (1995). Computer Self-Efficacy: Development of a Measure and Initial Test. MIS Quarterly, 19, 189-211. https://doi.org/10.2307/249688

Darwanto, D. (2022). Korelasi Sikap Belajar Dengan Hasil Belajar Siswa. Eksponen, doi: 10.47637/eksponen.v12i1.516

Darwin, M. (2021). Metode Penelitian Pendekatan Kuantitatif (T. S. Tambunan, Ed.). CV. MEDIA SAINS INDONESIA. www.penerbit.medsan.co.id

Dhila, Ramdhani, Setiawati. (2023). Hubungan antara Locus Of Control dengan Kematangan Karier pada Mahasiswa: Tinjauan Literatur Sistematis. Edu Consilium, doi: 10.19105/ec.v4i1.8078

Drago, A., Rheinheimer, D. C., & Detweiler, T. N. (2018). Effects of Locus of Control, Academic Self-Efficacy, and Tutoring on Academic Performance. Journal of College Student Retention: Research, Theory and Practice, 19(4), 433–451. https://doi.org/10.1177/1521025116645602

Fuhai, Xi, Zhang. (2022). Relationship between Technology Acceptance and Self-Directed Learning: Mediation Role of Positive Emotions and Technological Self-Efficacy. *Sustainability (Switzerland)*, *14*(16). https://doi.org/10.3390/su141610390

Gagné, Robert, M.,. (1972). Domains of learning. Interchange, doi: 10.1007/BF02145939

Hermann, Mucke. (2023). Investigating Latent Interactions between Students' Affective Cognition and Learning Performance: Meta-Analysis of Affective and Cognitive Factors. Behavioral sciences, doi: 10.3390/bs13070555

Jacqueline, Ancess. (2000). The Reciprocal Influence of Teacher Learning, Teaching Practice, School Restructuring, and Student Learning Outcomes. Teachers College Record, doi: 10.1111/0161-4681.00069

Jan, S. K. (2015). The relationships between academic self-efficacy, computer self-efficacy, prior experience, and satisfaction with online learning. *American Journal of Distance Education*, *29*(1), 30–40. https://doi.org/10.1080/08923647.2015.994366

Joakim, Caspersen., Jens-Christian, Smeby. (2018). The relationship among learning outcome measures used in higher education. Quality in Higher Education, doi: 10.1080/13538322.2018.1484411

Joo, Y. J., Lim, K. Y., & Kim, J. (2013). Locus of control, self-efficacy, and task value as predictors of learning outcome in an online university context. Computers and Education, 62, 149–158. https://doi.org/10.1016/j.compedu.2012.10.027

Kurniawati, H., & Liana, C. (2022). Pengaruh Efikasi Diri (Self Efficacy) Terhadap Hasil Belajar Sejarah Siswa Kelas XI IPS MAN 1 Bojonegoro. *Journal Pendidikan Sejarah*, *12*(1).

Lase, D. (2019). Pendidikan di Era Revolusi Industri 4.0. SUNDERMANN: Jurnal Ilmiah Teologi, Pendidikan, Sains, Humaniora Dan Kebudayaan, 12(2), 28–43. https://doi.org/10.36588/sundermann.v1i1.18

Leomar, Galicia. (2023). Technological Self-efficacy, Learning Motivation, and Selfdirected Learning of Selected Senior High School Students in a Blended Learning Environment. Technium Social Sciences Journal, doi: 10.47577/tssj.v44i1.8980

Maulana, N. (2018). *Pengaruh Konsep Diri dan Locus of Control Terhadap Hasil Belajar Siswa Pada Mata Pelajaran Ekonomi*. Universitas Pendidikan Indonesia.

Mehboob, Ul, Hassan., Rafaqat, Ali, Akbar. (2020). Locus of Control: Teachers' Neglected Attribute towards Students' Achievement Scores in Facing Diverse Socioeconomic Status.. doi: 10.33225/PEC/20.78.282

Millenia, Taufik. (2023). Hubungan Locus of Control dengan Kematangan Karier Siswa Hasil Belajar Rendah. Jurnal Neo Konseling, doi: 10.24036/00711kons2023

Nargis, Ashiq, Abbas. (2020). Mediating Effect of It Tools Usage on the Relationship Between Academic Self-efficacy, Learning Attitude and Academic Performance. doi: 10.47067/RAMSS.V3I3.72

Neal, J., Enright. (2023). Perspective Chapter: Impact of COVID-19 on Learning Outcomes of Students. doi: 10.5772/intechopen.107390

Neha, Abraham, Rajalakshmi. (2021). Self-Efficacy and Locus of Control Among School Students. doi: 10.25215/0903.001

Pratiwi, Neviyarni., Solfema. (2018). Contribution self-efficacy and independent learning math toward students' mathematics learning outcomes. doi: 10.29210/2018199

Rafidatul, Afakhrul, Masub, Bakhtiar. (2022). Pengaruh penggunaan metode fun learning untuk menumbuhkan semangat siswa kelas iii upt sdn 23 gresik. Didaktik: Jurnal Ilmiah PGSD STKIP Subang, doi: 10.36989/didaktik.v8i2.527

Rahman., Bhuiyan, Hossain., Sifa. (2023). Impact of technology self-efficacy on online learning effectiveness during the COVID-19 pandemic. Kybernetes, doi: 10.1108/k-07-2022-1049

Rashi, Malik. (2023). Impact of Technology-based Education on Student Learning Outcomes and Engagement.

Riduwan, & Kuncoro. (2012). *Cara Menggunakan dan Memakai Path Analysis*. Alfabeta.

Rotter, J. B. (1966). Generalized Expectancies for Internal Versus External Control of Reinforcement. *Psychological Monographs: General and Applied*, *80*(1).

Saville, Foster. (2021). Does technology self-efficacy influence the effect of training presentation mode on training self-efficacy?. doi: 10.1016/J.CHBR.2021.100124

Sinaga, D. (2014). *Statistika Dasar*. UKI PRESS.

Stephanie, Bowden, Brock, Bunch. (2020). Teacher dispositions as predictors of technology integration: a changing tide. International journal of business, doi: 10.33642/IJBASS.V6N1P2

Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif Dan R&D* (19th ed.). ALFABETA.

Syatriadin. (2017). Locus of Control : Teori Temuan Penelitian dan Reorientasinya dalam Manajemen Penanganan Kesulitan Belajar Peserta Didik. doi: 10.36088/FONDATIA.V1I1.93

Syatriadin. (2017). Locus of Control : Teori Temuan Penelitian dan Reorientasinya dalam Manajemen Penanganan Kesulitan Belajar Peserta Didik. doi: 10.36088/FONDATIA.V1I1.93

Taherdoost, H. (2019). What Is the Best Response Scale for Survey and Questionnaire Design; Review of Different Lengths of Rating Scale, Attitude Scale, Likert Scale. International Journal of Academic Research in Management.

Uldana, Baizyldayeva. (2020). How Social Media Usage Influences Student Learning Outcomes. doi: 10.4018/978-1-7998-2551-7.CH011

Uus, Rahmat, Kurniawan. (2019). The important of self-efficacy and self-regulation in learning: How should a student be?. doi: 10.1088/1742-6596/1157/2/022074

Wang, C. H., Shannon, D. M., & Ross, M. E. (2013). Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education*, *34*(3), 302–323. https://doi.org/10.1080/01587919.2013.835779

Yarmis, Tania, Nuzila, Zahri. (2019). Student's Problems Learning and Guidance Counseling Services in the Era of Industrial Revolution 4.0. doi: 10.2991/ICET-19.2019.174

Ziblim, Mohammed, Mashoud, Andani. (2020). Academic Outcomes of High School Students in Northern Ghana: The Mediator Role of Locus of Control. Journal of Educational and Social Research, doi: 10.36941/JESR-2020-0011