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EXPLORING THE INFLUENCE OF IMPLEMENTING AN INDEPENDENT CURRICULUM AND LEARNING QUALITY ON LEARNING EFFECTIVENESS: DOES THE MEDIATION OF SCHOOL INFRASTRUCTURE MATTER?

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ABSTRACT

The study focuses on the impact of infrastructure in facilitating the implementation of a student-centered, problem-solving curriculum aimed at developing 21st-century skills. By surveying 70 teachers at MTs Al-Islam Ponorogo using a Likert scale questionnaire, the research found that the independent curriculum significantly influences infrastructure and learning effectiveness. Moreover, infrastructure acts as a mediator between the curriculum and mutual learning. These results underscore the crucial role of infrastructure in enhancing learning outcomes through student-centered approaches.Practical implications include the need for relevant curricula that cater to students' needs and enhance learning experiences. The study advocates for program development that prioritizes strengthening infrastructure, integrating independent curriculum implementation, and promoting mutual learning to boost overall learning effectiveness. By emphasizing the importance of facilities in supporting educational initiatives, the research highlights the significance of creating conducive environments for effective teaching and learning practices.

Introduction

Learning effectiveness is a measure of the success of the interaction process between students and students and teachers when learning occurs (Amenah Kareem et al., 2024). Matitaputty & Sopacua (2023) said that learning effectiveness is one of the quality standards of education and is measured by achieving objectives. The effectiveness of learning can be seen from student activities when learning takes place, student responses to learning, and mastery of the material received by students (Rendoth et al., 2024; Sumadi et al., 2022).

In achieving the learning concept, there needs to be cooperation between teachers and students, Furthermore, adjustments also need to be made to the conditions of the school environment, the facilities and infrastructure, and the learning media required to support the achievement of learning objectives (Brink et al., 2023; Kundu & Bej, 2021; Sutrisno et al.,

2023). There are five indicators: attitude, ability to understand instruction, opportunity, and quality of instruction. (Poon et al., 2024)

This indicator shows that learning can be effective if there is a willingness in the students to learn and the teacher's readiness for learning (Ramanan & Mohamad, 2020). If these five indicators are not implemented, the impact on teaching and learning activities will not run well. This is further strengthened by research conducted by (Umar & Ko 2022) which shows that the effectiveness of learning can run well because the implementation of habituation continues so that students get used to the activities carried out at school.

Furthermore, the role of the teacher also influences the success of learning effectiveness (Lei et al., 2024; Setyabudhi & Veza, 2022)**.** Teacher readiness in planning learning, providing role models, helping solve problems for students, and providing motivational encouragement to students. If the teacher can prepare and practice well, it will have a good impact on the effectiveness of learning (Wang et al., 2024). The curriculum also has a role in achieving learning effectiveness (Coman et al., 2020; Matitaputty & Sopacua, 2023).

Good implementation will have an impact on student's level of understanding regarding the material presented by the teacher. However, as time goes by, the educational curriculum has undergone changes, one of which is the 2013 curriculum changing to the independent curriculum. According to Istaryaningtyas et al. (2021), the independent curriculum carries the concept of "Freedom of Learning" which is different from the 2013 curriculum, meaning that schools are given the freedom to develop the curriculum according to the potential of the school and the potential of the area around the school environment (Demirdag et al., 2024)

It is hoped that the implementation of the independent curriculum in educational institutions will require every teacher to be creative and innovative in learning, thereby creating a pleasant learning atmosphere for students (Rakhman & Surur, 2024; Zaenab et al., 2023). The implementation of the independent curriculum, in the teaching and learning process tends to use a differentiation approach. Meanwhile, the special characteristic of the independent curriculum is that it clearly shows the position of differentiation in grouping learning outcomes (Aini & Adiyono, 2023; Wanti & Chastanti, 2023).

Dividing learning outcomes will help teachers in the learning process, teachers can adapt what materials and methods will be used for the learning process according to the characteristics of students (Abdullah et al., 2024). There are several components for quality learning, namely: structured curriculum, clear learning objectives, varied learning strategies, diversification of learning resources, interaction and collaboration, use of technology, constructive feedback, authentic assessment, differentiation, development of 21st-century skills, and a comfortable environment (Erifal et al., 2023; Suryati et al., 2023).

Method

This research uses a quantitative approach with ex-post facto research methods (Apriliani et al., 2023; Putra et al., 2022; Widayanto et al., 2021). The ex-post facto research method was chosen because this research aims to retrospectively examine the construction of teacher performance variables. This research design uses an explanatory and correlational approach using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is an approach used to explore the relationship between variables in a conceptual model. PLS-SEM is a multivariate statistical method used to analyze the relationship between latent variables or measured variables in a structural model. PLS-SEM allows researchers to test models holistically, including identifying cause-and-effect relationships and correlation relationships between variables, thereby providing a deeper understanding of the observed phenomena. This research uses non-probability sampling with purposive sampling technique. The sample in this

study was 70 MTS AL-ISLAM Ponorogo teachers. This research was conducted from January 12 to January 24 2024.

Result and Discussion

Evaluation of Measurement Models

Evaluation of measurement models is very important to ensure that the indicators used to measure latent constructs or variables are by the research objectives and have good quality. Examining construct validity is the primary goal of measuring model evaluation. Analyzing the relationship between the indicator and the measured construct can ensure that the indicator truly reflects the intended aspect of the construct. By analyzing factor loadings, reliability, and discriminant validity, researchers can decide which indicators should be included in the analysis and which should be omitted.

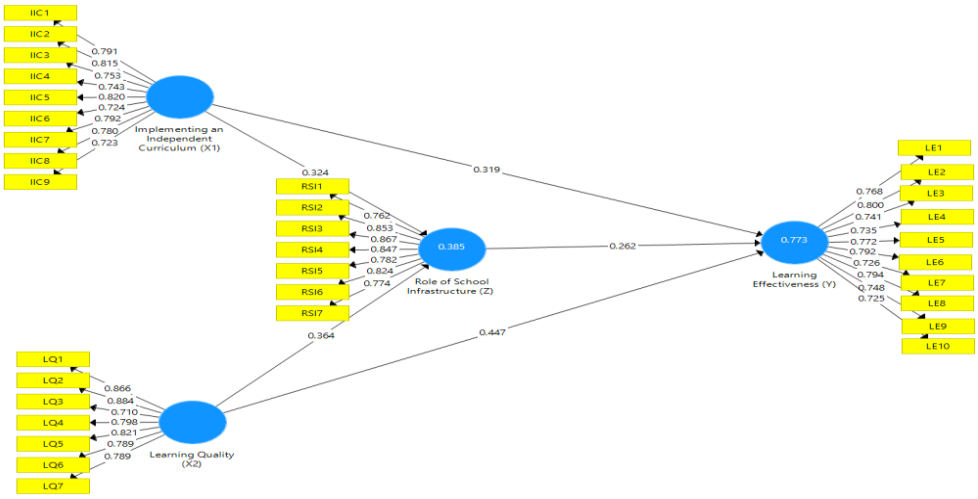

Figure 1. Measurement Models

The convergent validity measurement uses a factor loading value limit of 0.70. Based on Table 2, the overall loading factor value for each sub-variable is >0.70 (0.710 – Learning Focus to 0.884 – Collaboration). This can be interpreted as meaning that the level of correlation between sub-variables and variables that can be explained is 71.00% to 88.40%. The Average Extracted Variance (AVE) value for each variable has a value of >0.50 (0.919 - Learning Effectiveness (Y) to 0.596 - Implementing an Independent Curriculum (X1). So, it can be concluded that each sub-variable and variable in the instrument in the research model supports the requirements of convergent validity. Based on the factor loading coefficient value, the most dominant statement item in measuring Learning Effectiveness is the Teaching Method construct of 0.884 (X2.1). This can be interpreted that the Teaching Method construct can measure Learning Effectiveness by 88.40% Meanwhile, the weakest item is Utilizing Ice Breaking at 0.710 (X2.2 = 71.00%).

Table 1. Outer Model: Convergent Validity and Reliability

No	Variables	Indicator	Conver Validity		Consistency Reliability		
			FL (λ>0.70)	AVE (>0.50)	CA (α>0.70)	rho_A (φ>0.70)	CR (δ>0.70)
1	Implementing an	IIC1	0.791	0.596	0.916	0.929	0.930
2	Independent	IIC2	0.815				
3	Curriculum (X1)	IIC3	0.815				
4		IIC4	0.743				
5		IIC5	0.820				

No	Variables	Indicator	Conver Validity		Consistency Reliability		
			FL (λ>0.70)	AVE (>0.50)	CA (α>0.70)	rho_A (φ>0.70)	CR (δ>0.70)
6		IIC6	0.724				
7		IIC7	0.792				
8		IIC8	0.780				
9		IIC9	0.723				
10	Learning Quality	LQ1	0.866	0.912	0.932	0.915	0.930
11	(X2)	LQ2	0.884				
12		LQ3	0.710				
13		LQ4	0.798				
14		LQ5	0.821				
15		LQ6	0.789				
16		LQ7	0.789				
17.	Role of School	RSI1	0.762	0.916	0.889	0.917	0.933
18.	Infrastructure	RSI2	0.853				
19.	(Z)	RSI3	0.867				
20.		RSI4	0.847				
21.		RSI5	0.782				
22.		RSI6	0.824				
23.		RSI7	0.774				
24.	Learning	LE1	0.768	0.919	0.904	0.920	0.932
25.	Effectiveness (Y)	LE2	0.725				
26.		LE3	0.800				
27.		LE4	0.741				
28.		LE5	0.735				
29.		LE6	0.772				
30.		LE7	0.792				
31.		LE8	0.726				
32.		LE9	0.794				
33.		LE10	0.748				

In order to determine the reliability of a variable, it must have CA, Rho_A, and CR values equal to or greater than 0.70. According to the output from SmartPLS in Table 2, all variables meet this criteria with CA values ranging from 0.889 to 0.932, Rho_A values from 0.915 to 0.929, and CR values from 0.930 to 0.933. This indicates that the internal reliability instrument is consistent across three aspects, demonstrating good reliability in measuring teacher performance.

Evaluation of Structural Models

Structural evaluation in testing on PLS-SEM has the main objective, namely to assess the prediction accuracy of the proposed model. This is done by evaluating the extent to which the model is able to explain variations in empirical data and predict endogenous variables well. Overall, structural evaluation aims to improve understanding of the phenomenon studied in the research context. By analyzing the relationships between variables, researchers can identify the factors that contribute to the phenomenon and develop deeper insight into the dynamics involved.

Table 2. Measurement of Structural Model: R2, F2, Q2

Variables	R2		F2		Construct Cross-validated (Q2)				
	Value	Decision	Value	Decision	Redundancy SSE	Redundancy Q2	Communality SSE	Communality Q2	Predictive Power
Y	0.773	Kuat	-	-	397	0.433	265	0.478	Strong
X3	-	-	0.472	Medium	490	-	239	0.512	Strong
X1	-	-	0.246	Small	630	-	355	0.436	Strong
Z	0.379	Weak	0.186	Large	382	0.177	236	0.518	Strong

Based on the information provided in the table, the R2 coefficient for the Learning Effectiveness variable is 0.773, indicating that the Independent Curriculum, Learning Quality, and Infrastructure collectively influence Learning Effectiveness by 77.30%, while the remaining 22.70% is influenced by other variables not included in the model. Furthermore, the

effect size analysis reveals that Learning Quality has the most substantial impact on Learning Effectiveness (f2 = 0.472 in the strong category), while Facilities and Infrastructure have the weakest influence (f2 = 0.186 in the small category).

The predictive relevance test (Q2) validates the model's ability to predict real-world outcomes. All Q2 values in the table exceed zero, with values ranging from 0.436 to 0.518 for Redundancy Construct Crossvalidated and 0.219 to 0.433 for Communality Construct Crossvalidated. This indicates that the model can explain 21.90% to 43.30% of the phenomenon studied in terms of Learning Effectiveness. Overall, these results demonstrate that Learning Effectiveness has strong predictive power within the model, with Learning Quality being the most influential factor and Facilities and Infrastructure playing a smaller role in predicting Learning Effectiveness.

Measurement of Direct Effects

One of the main goals of hypothesis testing is to examine the relationships between variables in a proposed model. This is done by analyzing the strength and significance of the relationships between the variables identified in the model. Direct effect evaluation allows researchers to test the consistency between empirical findings and the theory that supports the model. Furthermore, this test analyzes the significance of the mediation effect in the research model. This is important for understanding the mechanisms underlying relationships between variables and how certain variables can mediate or change relationships between other variables.

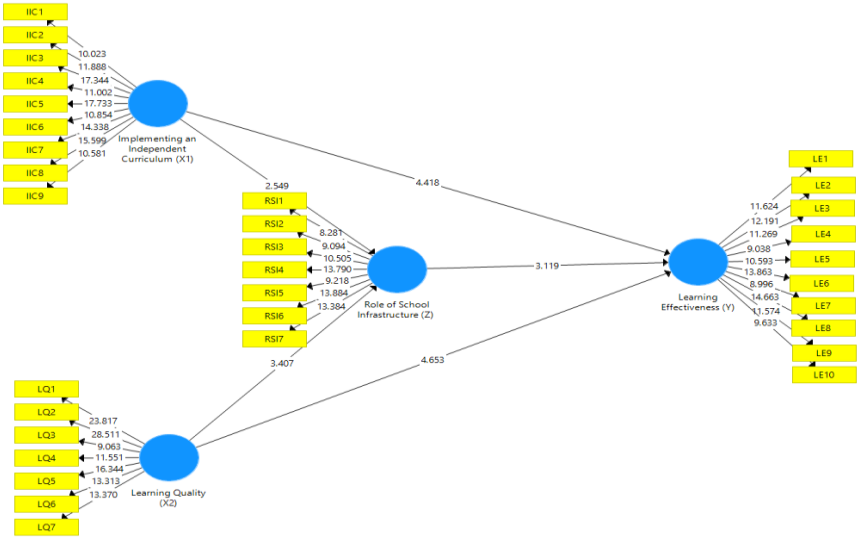

Figure 2. Measurement of Direct Effects

A hypothesis can be accepted with significant criteria if it has a T-statistic value above 1.96. Meanwhile, the hypothesis can be accepted with positive or negative influence if the B-value coefficient value shows the direction of positive or negative influence. Based on the table below, the hypothesis H1 (Implementing an Independent Curriculum (X1) → Learning Effectiveness (Y) obtained β-values = 0.034 and P values = 0.012 (0.05). This shows that the variable Implementing an Independent Curriculum (X1) has a positive, significant effect on Learning Effectiveness (Y). This can be interpreted that when the Implementing an Independent Curriculum (X1) variable increases, the Learning Effectiveness (Y) variable will also increase significantly. In hypothesis H2 (Implementing an Independent Curriculum (X1) → Role of Infrastructure School (Z) Obtain β-values = 0.319 and P values = 0,000 (0.05). This shows that

the implementation variable is the independent curriculum (X1) has a positive, significant, significant role in the role of infrastructure school (Z). This can be interpreted that when the Implementing an Independent Curriculum variable (X1) increases, the Role of School Infrastructure variable (Z) will also increase significantly.

In hypothesis H3 Learning Quality (X2) → Learning Effectiveness (Y) obtains β-values = 0.364 and P values = 0.001 (0.05). This shows that Learning Quality (X2) has a positive and significant effect on Learning Effectiveness (Y). This can be interpreted as meaning that when the Learning Quality variable (X2) increases, the Learning Effectiveness variable (Y) will also increase and vice versa. In hypothesis H4 Learning Quality (X2) → Role of School Infrastructure (Z) obtained β-values = 0.447 and P values = 0.000 (0.05). This shows that Learning Quality (X2) has a positive and significant effect on the Role of School Infrastructure (Z). This can be interpreted as meaning that when the Learning Quality variable (X2) increases, the Role of the School Infrastructure variable (Z) will also increase and vice versa. In hypothesis H5 role of School Infrastructure (Z) → Learning Effectiveness (Y) obtained β-values = 0.262 and P values = 0.001 (0.05). This shows that the Role of School Infrastructure has a positive and significant effect on Learning Effectiveness (Y). This can be interpreted as meaning that when the Role of School Infrastructure (Z) variable increases, the Learning Effectiveness (Y) variable will also increase and vice versa.

Table 3. Results of Path Coefficients: Direct Effects

Hyp.	Path Analysis	β-Values (+/-)	Sample Mean	SDV	T-Statistics (>1,96)	P-Values (<0,05)	Decision
H-DIR$_1$	IIC→ LE	0.324	0.327	0.128	1,064	2.523	Accepted
H-DIR$_2$	IIC → LQ	0.319	0.329	0.072	2,102	4.428	Accepted
H-DIR$_3$	LQ→ LE	0,364	0.363	0.108	0,500	3.365	Accepted
H-DIR$_4$	LQ → LSI	0,447	0.439	0.100	3,049	4.473	Accepted
H-DIR$_5$	RSI→ LE	0,262	0.261	0.078	4,105	0.001	Accepted

The Mediating Role of Infrastructure on the Implementing an Independent Curriculum and Learning Quality on Learning Effectiveness

Based on the table below, in the H-IND1 hypothesis, the results of testing the mediating effect of the variable Role of School Infrastructure (Z) can be concluded that there is a positive influence (β-values = 0.048) and it is not significant (T statistic 1.978 > 1.96 and P values 0.048 <0.05) between the Implementing an Independent Curriculum (X1) factor on Learning Effectiveness (Y). So, H-IND1 states "There is no positive and significant influence on the role of school infrastructure in mediating implementing an independent curriculum on learning effectiveness".

In the H-IND2 hypothesis, the results of testing the mediating effect of the Role of School Infrastructure (Z) variable can be concluded that there is a positive (β-values = 0.095) and significant influence (T statistics 2.167 > 1.96 and P values 0.031 <0.05) between the Learning Quality (X2) factors and Learning Effectiveness (Y). So, H-IND2 states "There is a positive and significant influence on the role of school infrastructure in mediating learning quality on learning effectiveness".

Table 4. Results of Path Coefficients: Indirect Effects

Hyp.	Path Analysis	β-Values (+/-)	SDV	T-Statistics (>1,96)	P-values	Decision	Mediating Role
H-IND1	IIC→ RSI → LE	0.085	0.043	1.978	0.048	Accepted	Partial Mediation
H-IND2	LQ → RSI →LE	0.095	0.044	2.163	0.031	Accepted	Partial Mediation

Discussion

The influence of independent curriculum has a positive influence on increasing learning effectiveness. The implementation of the independent curriculum opens up opportunities for students to be more independent by discussing the learning material that has been provided during the teaching and learning process. This research is consistent with Wanti & Chastanti (2023) which states that the independent curriculum brings an educational concept that provides more opportunities for students to develop their independence. One of the main aspects is giving students space to explore their interests and talents. This research is also consistent with Aini & Adiyono (2023) which states that the implementation of an independent curriculum can encourage students to develop independent learning skills. Apart from being influenced by opening up opportunities for discussion for students, the implementation of the independent curriculum is also influenced by the second indicator, namely the learning environment (Hariyanto et al., 2022; Rakhman & Surur, 2024).

The implementation of the independent curriculum also has a positive impact on the effectiveness of learning at school (Coman et al., 2020; Lei et al., 2024). This is proven by giving teachers the freedom to design relevant learning according to student needs, the learning process becomes more interesting and meaningful for students. Increasing focus on the quality of learning also encourages teachers to pay more attention to student learning outcomes. The quality of learning is an important factor in achieving learning effectiveness. The quality of learning is closely related to the teaching methods applied by educators. This research is consistent with Ali et al. (2024) which states that the application of interactive teaching methods can create a more interesting learning environment and motivate students to be actively involved in the learning process. The quality of learning is also influenced by a comfortable classroom atmosphere. This research is consistent with Jiménez-Bucarey et al. (2021) stating that comfortable classes play an important role in improving the quality of student learning. A comfortable and supportive classroom atmosphere can create a positive learning environment, where students feel safe to express, share ideas, and learn without fear. This has an impact on the effectiveness of learning during the learning process (Johnson et al., 2024; Yan et al., 2022).

Paying attention to the condition of school facilities and infrastructure is an important factor in achieving learning effectiveness. This statement is supported by Yangambi (2023) which states that it is important to prioritize the need for infrastructure in achieving learning effectiveness. Adequate facilities and infrastructure can create a conducive and supportive learning environment for students and educators. In this case, curriculum and policies also have an important role in determining the achievement of learning effectiveness. This statement is supported by Sutrisno et al. (2023) that a well-designed curriculum must take into account the facilities and infrastructure needed to support the implementation of learning. In this case, policies related to budget allocation and management of facilities and infrastructure in schools are crucial to ensure that the facilities needed to support the curriculum are provided adequately.

Teachers can have more freedom to create an interactive and participatory learning atmosphere by utilizing the various facilities available. With learning support technology, teachers can create learning that is more interesting and relevant for students (Fabre & Straub, 2023; Kundu & Bej, 2021). This will make the learning process more effective, and efficient and can help in improving the quality of the curriculum and learning evaluation (Khakimov & Sharopov, 2023; Safrida et al., 2023). Supportive facilities make it easier for teachers to implement a curriculum that suits students' needs and scientific developments. Furthermore, the learning evaluation process can also be carried out more systematically and structured using various supporting media and technology (She, 2024; Suryati et al., 2023). This will help teachers monitor student learning progress and provide appropriate guidance according to each student's needs.

Improving facilities and infrastructure is an urgent necessity in linking the implementation of an independent curriculum, the quality of learning, and the effectiveness of

learning (Lassa et al., 2023; Sanusi et al., 2022). The self-paced curriculum emphasizes student-centered, problem-solving-oriented learning, and the development of 21st-century skills. Adequate infrastructure is needed to support the implementation of this curriculum, such as laboratories, software, and adequate internet access to support interactive and creative learning. Good infrastructure can improve the quality of learning by providing an environment that allows students and teachers to interact effectively (Haleem et al., 2022; Yangambi, 2023). For example, comfortable classrooms, well-stocked libraries, and modern laboratory equipment can facilitate student-centered and project-based learning.

Conclusion

This research recommends that schools improve existing infrastructure facilities according to current needs. Infrastructure facilities have a reciprocal influence on learning effectiveness because adequate infrastructure can provide a conducive environment for the teaching and learning process. By understanding how physical factors such as classrooms, libraries, and laboratories can be used to design better infrastructure development strategies to support optimal learning processes at various levels of education. So that it can improve the quality of learning.

As a suggestion, further research in the field of infrastructure as a mediator of learning quality on learning effectiveness could expand the scope to include analysis of complementary aspects that can influence the learning process. Factors such as educational technology, innovative learning space design, and environmental sustainability can also be a value-added research focus. In addition, it is also important to integrate students' perspectives and their opinions about how infrastructure influences their learning experiences so that research results can be more holistic and relevant in improving learning effectiveness in the future.

References

Abdullah, N. L., Ramdan, M. R., Ngah, N. S., Yin, K. Y., Shokory, S. M., Fuad, D. R. S. M., & Yonus, A. (2024). An Integrated Framework of Online Learning Effectiveness in Institutions of Higher Learning. European Journal of Educational Research, volume-13-2024(volume-13-issue-3-july-2024), 1321–1333.

Aini, Q., & Adiyono. (2023). Implementation of an Independent Curriculum in Supporting Students' Freedom to Create and Learn. *Journal of Scientific Research, Education, and Technology (JSRET)*, *2*(3), https://doi.org/10.58526/jsret.v2i3.187

Ali, S., Bhutta, S. M., Ahmad, S., Ansari, A. N., Ahmed, A., & Qadir, Y. (2024). PROTOCOL: Effectiveness of public-private partnerships on educational access and quality of primary and secondary schooling in low- and middle-income countries: A systematic review. *Campbell Systematic Reviews*, *20*(2), 1–13. https://doi.org/10.1002/cl2.1385

Amenah Kareem, H., Ashoor, I. A., & Majed, S. S. (2024). The Effectiveness of a Differentiated Learning Strategy using Flexible Groups to Improve Football Skills and Keep It. *International Journal of Disabilities Sports and Health Sciences*, *7*(1), 236–244.

Apriliani, F. D., Widihastuti, Daryono, R. W., Jaya, D. J., & Rizbudiani, A. D. (2023). The Influence of Fashion Knowledge, Fashion Selection Factor, and Dress Etiquette on Dress Look. *Jurnal Pendidikan Dan Pengajaran*, *56*(1), https://doi.org/10.23887/jpp.v56i1.53677

Brink, H. W., Lechner, S. C. M., Loomans, M. G. L. C., Mobach, M. P., & Kort, H. S. M. (2023). Understanding how indoor environmental classroom conditions influence academic performance in higher education. *Facilities*, *42*(3/4), 185–200. https://doi.org/10.1108/F-12-2022-0164

Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online Teaching and Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. *Sustainability*, *12*(4), https://doi.org/10.3390/su122410367

Daryono, R. W., Hariyanto, V. L., Usman, H., & Sutarto, S. (2020). Factor analysis: Competency framework for measuring student achievements of architectural engineering education in Indonesia. *REID (Research and Evaluation in Education)*, *6*(2), https://doi.org/10.21831/reid.v6i2.32743

Daryono, R. W., Hidayat, N., Nurtanto, M., & Fu'adi, A. (2024). The development of a competency framework for architectural engineering graduates: Perspectives by the construction industry in Indonesia. *Journal of Technology and Science Education*, *14*(2), https://doi.org/10.3926/jotse.1986

Daryono, R. W., Ramadhan, M. A., Kholifah, N., Isnantyo, F. D., & Nurtanto, M. (2023). An empirical study to evaluate the student competency of vocational education. *International Journal of Evaluation and Research in Education (IJERE)*, *12*(2), https://doi.org/10.11591/ijere.v12i2.22805

Demirdag, M. C., Kucuk, S., & Tasgin, A. (2024). An Investigation of the Effectiveness of Augmented Reality Technology Supported English Language Learning Activities on Preschool Children. International Journal of Human–Computer Interaction.

Destari, D., Saufi, M., Arijanti, S., Haddar, G. A., & Kasmilawati, I. (2023). The Implementation of School-Based Management in Supporting Standard of School Infrastructure and Facilities in Islamic Private School. *Journal on Education*, *5*(3)

Erifal, E., Fitria, H., & Eddy, S. (2023). Implementation of the Independent Curriculum at SMA Negeri 1 Kayuagung. *Journal of Social Work and Science Education*, *4*(3), Article 3. https://doi.org/10.52690/jswse.v4i3.556

Fabre, A., & Straub, S. (2023). The Impact of Public–Private Partnerships (PPPs) in Infrastructure, Health, and Education. *Journal of Economic Literature*, *61*(2), 655–715. https://doi.org/10.1257/jel.20211607

Fauzan, A., Triyono, M. B., Hardiyanta, R. A. P., Daryono, R. W., & Arifah, S. (2023). The Effect of Internship and Work Motivation on Students' Work Readiness in Vocational Education: PLS-SEM Approach. *Journal of Innovation in Educational and Cultural Research*, *4*(1), Article 1. https://doi.org/10.46843/jiecr.v4i1.413

Hadi, M., Rosadi, P., & Lestari, Y. B. (2024). Teachers' Reflective Practice in Implementing the Kurikulum Merdeka (Case Study at SMA Negeri 1 KURIPAN). *International Journal of Multicultural and Multireligious Understanding*, *11*(3), https://doi.org/10.18415/ijmmu.v11i3.5531

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, *3*(5), 275–285. https://doi.org/10.1016/j.susoc.2022.05.004

Hariyanto, V. L., Daryono, R. W., Hidayat, N., Prayitno, S. H., & Nurtanto, M. (2022). A framework for measuring the level of achievement of vocational students' competency of architecture education. *Journal of Technology and Science Education*, *12*(1), https://doi.org/10.3926/jotse.1188

Istaryaningtyas, I., L, S., & E, H. (2021). Management of the Independent Learning Curriculum during the Covid-19 Pandemic. *Journal of Education Research and Evaluation*, *5*(2), https://doi.org/10.23887/jere.v5i2.32998

Jiménez-Bucarey, C., Acevedo-Duque, Á., Müller-Pérez, S., Aguilar-Gallardo, L., Mora-Moscoso, M., & Vargas, E. C. (2021). Student's Satisfaction of the Quality of Online Learning in Higher Education: An Empirical Study. *Sustainability*, *13*(21), https://doi.org/10.3390/su132111960

Johnson, H., Fifolt, M., Knight, C., Wingate, M., Becker, D., & Preskitt, J. (2024). Promotion of school readiness in home visiting: Creating a key driver diagram for continuous quality improvement. *Early Child Development and Care, 194*(2), 183–194. https://doi.org/10.1080/03004430.2023.2285699

Kamrat, R., Wisedsang, P., & Pitprasert, U. (2022). Relationship between Total Quality Management and Effectiveness of the Schools under Surin Primary Educational Service Area Office 3. *Journal of Graduate School, Pitchayatat, Ubon Ratchathani Rajabhat University*, *17*(1)

Khakimov, S. R., & Sharopov, B. K. (2023). Educational Quality Improvement Events Based on Exhibition Materials in Practical Training Lessons. *American Journal of Language, Literacy and Learning in STEM Education (2993-2769)*, *1*(2)

Kundu, A., & Bej, T. (2021). We have efficacy but lack infrastructure: Teachers' views on online teaching learning during COVID-19. *Quality Assurance in Education*, *29*(4), 344–372. https://doi.org/10.1108/QAE-05-2020-0058

Lassa, J., Petal, M., & Surjan, A. (2023). Understanding the impacts of floods on learning quality, school facilities, and educational recovery in Indonesia. *Disasters*, *47*(2), 412–436. https://doi.org/10.1111/disa.12543

Lei, H., Chen, C., & Luo, L. (2024). The examination of the relationship between learning motivation and learning effectiveness: A mediation model of learning engagement. *Humanities and Social Sciences Communications*, *11*(1), 1–11. https://doi.org/10.1057/s41599-024-02666-6

Lisdawati, L. (2024). Independent Curriculum Based Learning Management in Primary School Education Units. *PPSDP International Journal of Education*, *3*(1), https://doi.org/10.59175/pijed.v3i1.182

Matitaputty, J. K., & Sopacua, J. (2023). The Effectiveness of the Learning Cycle 5E Learning Model in an Effort to Improve Learning Outcomes of History. *JIM: Jurnal Ilmiah Mahasiswa Pendidikan Sejarah*, *8*(2),https://doi.org/10.24815/jimps.v8i2.24816

Mukhtasar, M., Begyor, S., Aleksandr, K., Farrukh, D., Isroil, U., Sodiqjon, K., & Akbarjon, A. (2022). Effectiveness Analysis of the Development of the German Education System in Our Country. *Journal of New Century Innovations*, *18*(1)

Opabola, E. A., Galasso, C., Rossetto, T., Meilianda, E., Idris, Y., & Nurdin, S. (2023). Investing in disaster preparedness and effective recovery of school physical infrastructure. *International Journal of Disaster Risk Reduction*, *90*(4), 10–36. https://doi.org/10.1016/j.ijdrr.2023.103623.

Poon, W. C., Kunchamboo, V., & Koay, K. Y. (2024). E-Learning Engagement and Effectiveness during the COVID-19 Pandemic: The Interaction Model. International Journal of Human–Computer Interaction, 40(2), 393–408.

Putra, K. A. J., Triyono, M. B., & Daryono, R. W. (2022). The Influence of Entrepreneurship Competency and Leadership Challenge to Principals' Leadership Solutions. *Jurnal Pendidikan Dan Pengajaran*, *55*(2) https://doi.org/10.23887/jpp.v55i2.43711

Rakhman, F., & Surur, M. (2024). Analysis of Constraints on the Implementation of the Independent Curriculum in PAUD Level Mobilizing Schools in Situbondo District. *Didaktika: Jurnal Kependidikan*, *13*(1) https://doi.org/10.58230/27454312.405

Ramanan, B., & Mohamad, M. B. (2020). Validating a Model of Change Readiness among Malaysian School Teachers: A Structural Equation Modeling Approach. *International Journal of Learning, Teaching and Educational Research*, *19*(2)

Rendoth, T., Duncan, J., Foggett, J., & Colyvas, K. (2024). Curriculum effectiveness for secondary-aged students with severe intellectual disabilities or profound and multiple

learning difficulties in Australia: Teacher perspectives. *Journal of Intellectual Disabilities*, 17446295241228729. https://doi.org/10.1177/17446295241228729

Safrida, S., Tannady, H., Solissa, E. M., Sapulete, H., & Haddar, G. A. (2023). Strategic Leadership Analysis of School Principal to Improve Learning Quality. *Jurnal Pendidikan Dan Kewirausahaan*, *11*(2), Article 2. https://doi.org/10.47668/pkwu.v11i2.741

Sanusi, I. T., Oyelere, S. S., & Omidiora, J. O. (2022). Exploring teachers' preconceptions of teaching machine learning in high school: A preliminary insight from Africa. *Computers and Education Open*, *3*(3), 10–23. https://doi.org/10.1016/j.caeo.2021.100072

Setyabudhi, A. L., & Veza, O. (2022). Analysis of the Effectiveness of the Implementation of Online Learning at the Beginning of the Covid-19 Pandemic. *Technical and Vocational Education International Journal (TAVEIJ)*, *2*(2)

She, B. (2024). Practical research and analysis of the path to improving the quality of higher education institutions in the context of information technology. *Applied Mathematics and Nonlinear Sciences*, *9*(1), 21–36.

Sumadi, C. D., Hidayat, A., & Agustina, I. (2022). Literature Study: Analysis of Learning Facilities in the Pandemic Era on The Effectiveness of Online Learning in Elementary SchooL. *Widyagogik : Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*, *9*(2), Article 2. https://doi.org/10.21107/widyagogik.v9i2.13808

Supriyanto, S., Munadi, S., Daryono, R. W., Tuah, Y. A. E., Nurtanto, M., & Arifah, S. (2022). The Influence of Internship Experience and Work Motivation on Work Readiness in Vocational Students: PLS-SEM Analysis. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, *5*(1), https://doi.org/10.23917/ijolae.v5i1.20033

Suryati, L., Ambiyar, & Jalinus, N. (2023). Evaluation of the Implementation of the Independent Curriculum with a Technology-based Learning Model. *Jurnal Penelitian Dan Pengembangan Pendidikan*, *7*(3), Article 3. https://doi.org/10.23887/jppp.v7i3.66635

Sutrisno, S., Hayati, H., Saputra, N., Arifin, S., & Kartiko, A. (2023). The Influence of The Head of Madrasah and Infrastructure Facilities on The Quality of Education Through Teacher Competence. *Tafkir: Interdisciplinary Journal of Islamic Education*, *4*(2), https://doi.org/10.31538/tijie.v4i2.423

Umar, M., & Ko, I. (2022). E-Learning: Direct Effect of Student Learning Effectiveness and Engagement through Project-Based Learning, Team Cohesion, and Flipped Learning during the COVID-19 Pandemic. *Sustainability*, *14*(3), https://doi.org/10.3390/su14031724

Wang, M. J., Yang, L. Z., & Yang, W. H. (2024). The Perceived Effectiveness of the Blended Team-based Learning (BTBL) Model on Promoting Intercultural Awareness in Hospitality Education. Journal of Hospitality & Tourism Education, 36(1), 25–35.

Wanti, L., & Chastanti, I. (2023). Analysis of preparation in the independent curriculum implementation: Case study on IPAS learning. *BIO-INOVED : Jurnal Biologi-Inovasi Pendidikan*, *5*(2), https://doi.org/10.20527/bino.v5i2.15493

Widayanto, L. D., Soeharto, S., Sudira, P., Daryono, R. W., & Nurtanto, M. (2021). Implementation of the Education and Training Program seen from the CIPPO Perspective. *Journal of Education Research and Evaluation*, *5*(4), https://doi.org/10.23887/jere.v5i4.36826

Widyastuti, P., Hadi, S., Daryono, R. W., & Samad, N. B. A. (2023). The Mediation Role of University Environment in the Relationship between Self-Efficacy and Family Environment on Entrepreneurial Education Interest: A PLS-SEM Approach. *Indonesian*

Journal on Learning and Advanced Education (IJOLAE), *5*(3), https://doi.org/10.23917/ijolae.v5i3.22015

Yan, Z., Na, M., Alam, S. S., Masukujjaman, M., & Lu, Y. X. (2022). Teacher Competencies and School Improvement Specialist Coaching (SISC+) Programme in Malaysia as a Model for Improvement of Quality Education in China. *Sustainability*, *14*(23), https://doi.org/10.3390/su142316273

Yangambi, M. (2023). Impact of School Infrastructures on Students Learning and Performance: Case of Three Public Schools in a Developing Country. *Creative Education*, *14*(4), https://doi.org/10.4236/ce.2023.144052

Yu, Z. (2022). Sustaining Student Roles, Digital Literacy, Learning Achievements, and Motivation in Online Learning Environments during the COVID-19 Pandemic. *Sustainability*, *14*(8), Article 8. https://doi.org/10.3390/su14084388

Zaenab, Z., Samsudi, S., Hidayah, I., & Wahyudin, A. (2023). Implementation of the Independent Curriculum in Digital Literacy Training for Interactive Learning Media to Improve Pedagogic Competencies of Teachers in MTsN Gowa Regency. *International Conference on Science, Education, and Technology*, *9*(5), 899–906.