Implementation and Evaluation of Website-Based English Learning at SMPN 2 Sidareja Using the CIPP Model

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ABSTRACT

This study aims to evaluate the implementation of e-portfolio-based English language learning at SMP N 2 Sidareja using the CIPP (Context, Input, Process, Product) evaluation model proposed by Stufflebeam (2010). The research employed a mixed-method approach, with data collected through observation, questionnaires, and interviews. The participants consisted of 35 students, 3 English teachers, 1 principal, and 1 curriculum coordinator. Quantitative data were analyzed using SPSS. The instrument validity test results ranged from 0.612 to 0.823, and the reliability analysis indicated high reliability (Cronbach's Alpha = 0.876). The findings reveal that the implementation of e-portfolio-based learning aligns with the established instructional objectives. In terms of context, the use of e-portfolios supports efforts to improve students' English proficiency. Regarding input, the availability of facilities and infrastructure, as well as institutional support, was considered adequate. In the process dimension, e-portfolios were used consistently and effectively encouraged active student engagement. Quantitative data demonstrated an increase in positive student responses, from 67% (M = 2.68) to 98% (M = 3.85). Qualitative findings further indicated that teachers felt more confident in integrating digital technology into their teaching practices. In the product dimension, the use of e-portfolios had a positive impact on students' comprehension, participation, and English communication skills, both oral and written. Overall, the study concludes that e-portfolio-based English learning not only enhances instructional effectiveness but also creates a more meaningful and engaging learning experience through the integration of digital technology.

Keywords: Evaluation, English Language Teaching, E-Portfolio, CIPP Model

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Introduction

English language learning in Indonesian schools is one of the main priorities in responding to global challenges. According to constructivist theory, pioneered by Vygotsky, social interaction plays a crucial role in the learning process (Vygotsky, 1978). Through this approach, students are encouraged to collaborate and share understanding in order to strengthen their English proficiency. In addition, technology-based approaches have become an increasingly important trend in education, with the integration of digital tools that help students learn independently, interactively, and effectively. The Merdeka Curriculum emphasizes the importance of digital literacy as part of the effort to develop a generation equipped with strong language skills as well as relevant 21st-century competencies aligned with global demands (Ministry of Education, Culture, Research, and Technology, 2022). Through the integration of learning theories and educational innovations, Indonesian students are expected to compete on the international stage.

E-portfolio, or electronic portfolio, has been adopted by many educational institutions in various countries, including those in Asia, as an effective learning tool. Based on experiential learning theory, e-portfolio enables students to reflect deeply on their learning experiences, which is central to experience-based learning (Kolb, 1984). Experiential learning theory emphasizes the cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Furthermore, the implementation of e-portfolio aligns with the concept of authentic assessment, which emphasizes valid and meaningful evaluation to measure students' cognitive, affective, and psychomotor domains holistically (Wiggins, 1998).

Strohmeier (2010) observed that the use of e-portfolio has been implemented at various educational levels and across diverse academic backgrounds, demonstrating its effectiveness in enhancing student engagement. As part of technology integration in learning, e-portfolio is also considered an innovative educational technology relevant to 21st-century learning, supporting competency-based and collaborative learning (Redecker, 2017). This trend reflects global efforts by educational institutions to enhance interaction, engagement, and reflection in the learning process.

E-portfolio is a web-based artifact or collection that may include images, videos, audio recordings, and multimedia projects. Researchers generally describe e-portfolio as a digital adaptation of traditional paper-based portfolios. In educational contexts, e-portfolio has the potential to make learning more structured and reflective, encouraging students to actively engage in the learning process. Based on knowledge construction theory, learning occurs when learners actively construct meaning through interaction and reflection (Bruner, 1966). E-portfolio promotes idea sharing and collaborative knowledge building among students.

Moreover, cognitive flexibility theory emphasizes the importance of understanding content from multiple perspectives, particularly in complex learning environments (Spiro et al., 1988). E-portfolio provides a platform for exploring diverse formats and representations of knowledge, supporting flexible

thinking. As a platform for storing, displaying, and organizing information, e-portfolio also aligns with self-regulated learning theory, which highlights learners' ability to plan, monitor, and evaluate their own learning processes (Zimmerman, 2002). Through the use of e-portfolio, students can independently reflect on their progress, identify strengths and weaknesses, and take responsibility for their learning. Additionally, from the perspective of motivation theory, particularly self-determination theory, active participation and a sense of achievement enhance student engagement and intrinsic motivation (Deci & Ryan, 2000). E-portfolio facilitates deeper learning experiences by promoting autonomy, competence, and relatedness. For teachers, e-portfolio serves as an effective assessment tool because it enables more holistic, continuous, and authentic evaluation aligned with students' needs. With systematically documented learning outcomes, teachers can obtain a more comprehensive picture of students' progress.

Therefore, further evaluation is needed to assess the effectiveness of e-portfolio-based English learning. Several previous studies have examined the implementation of e-portfolio in learning contexts. Magdalena et al. (2023) indicated that portfolio-based assessment can improve student learning outcomes through a more transparent and fair evaluation process. Wulandari, Suryoputro, and Mulyono (2024) found that utilizing digital platforms such as Facebook as an e-portfolio medium can enhance student engagement in English speaking tasks. Similarly, Kholidiyah, Murtadho, and Mahliatussikah (2023) confirmed the positive impact of portfolio use on students' learning independence and language skills. However, these studies still show limitations, particularly regarding the implementation and effectiveness analysis of e-portfolio at the junior high school level, especially at SMP Negeri 2 Sidareja. Therefore, this study is designed to examine the effectiveness of e-portfolio-based English learning at SMP Negeri 2 Sidareja and to identify factors influencing its success as well as the challenges encountered in its implementation.

Method

This study adopts a problem-solving approach to evaluate the effectiveness of E-portfolio-based English language learning. To ensure a comprehensive and systematic evaluation, the Context, Input, Process, Product (CIPP) model developed by Stufflebeam (2003, 2007) was employed as the analytical framework. The CIPP model is widely recognized as an evaluation approach that not only measures outcomes but also supports informed decision-making and continuous improvement (Stufflebeam & Shinkfield, 2007).

According to Stufflebeam (2003), evaluation should function as a tool for improvement rather than merely as a mechanism for judgment. The CIPP model examines four essential dimensions: context, which identifies needs and program goals; input, which assesses strategies, resources, and action plans; process, which monitors the implementation of activities; and product, which evaluates outcomes and overall impact. This comprehensive structure allows evaluators to systematically examine both the strengths and weaknesses of an educational program (Stufflebeam & Coryn, 2014).

By applying this framework, the study does not simply determine whether E-portfolio-based learning is effective, but also seeks to understand how and why it works, what factors contribute to its success, and which areas require improvement. In this way, the findings can generate meaningful, evidence-based recommendations to enhance future instructional planning and program refinement.

Figure 1. Research Procedure

Research Setting and Participants

This study was carried out at SMP Negeri 2 Sidareja, a junior high school that has already adopted E-portfolio-based English language learning in its instructional practices. The school was selected because it actively integrates digital tools into English classes, allowing students to document their learning progress, reflect on their work, and develop their language skills in a more engaging way. To gain a clear and comprehensive picture of how this approach works in practice, the learning process was evaluated using the Context, Input, Process, and Product (CIPP) model. This model made it possible to examine not only learning outcomes, but also the planning and implementation stages of the program.

The participants in this study included 35 students who were directly involved in the E-portfolio-based learning activities, along with one English teacher who acted as the main facilitator of the learning process. The students used E-portfolios to complete and showcase their assignments, while the teacher designed the learning activities, guided students throughout the process, and assessed their progress using the digital portfolios.

To strengthen the quality and credibility of the study, several experts were also involved. These included one expert in English language education, one expert in online or digital learning, and one expert in educational evaluation. Their roles were to review and validate the research instruments, as well as to examine how well the evaluation was conducted based on the CIPP model. The experts provided constructive feedback to ensure that the instruments were

appropriate, the evaluation procedures were accurate, and the findings were trustworthy.

Types of Data, Instruments, and Data Collection Techniques Based on the CIPP Model

This study employed a mixed-method approach, integrating quantitative and qualitative data to obtain a comprehensive understanding of the effectiveness of E-portfolio-based English learning. A mixed-method design allows researchers to combine numerical trends with in-depth explanations, resulting in richer and more meaningful findings (Creswell & Plano Clark, 2018). The data collection procedures were carefully organized according to the four components of the CIPP evaluation model (Context, Input, Process, Product) developed by Stufflebeam (2003, 2007), ensuring that the evaluation was systematic and decision oriented.

Context Evaluation

The context evaluation aimed to understand the background and rationale for implementing E-portfolio-based English learning at SMP Negeri 2 Sidareja. This stage explored whether the program responded to students' learning needs, curriculum demands, and institutional goals. According to Stufflebeam and Coryn (2014), context evaluation helps decision-makers identify needs and set appropriate program objectives. Data were collected through:

a. Questionnaires distributed to students to explore their learning needs and perceptions regarding the use of E-portfolios.
b. Semi-structured interviews with the English teacher and school representatives to understand curriculum alignment and policy support.

By combining students' perspectives with institutional viewpoints, this stage ensured that the program was grounded in real educational needs rather than assumptions.

Input Evaluation

Input evaluation examined the readiness of resources and strategies supporting the implementation of the program. This included the availability of digital infrastructure, teacher competence in integrating technology, institutional support, and students' readiness to use E-portfolios. Input evaluation is essential to ensure that a program is feasible and supported by adequate planning (Stufflebeam, 2007). Data collection techniques included:

a. Questionnaires to assess perceptions of resource adequacy.
b. Interviews with teachers and administrators regarding instructional planning and digital readiness.
c. Focus Group Discussions (FGDs) involving selected students and stakeholders to gather deeper insights into preparation and challenges.

This stage provided a clearer picture of whether the program had strong foundational support before and during implementation.

Process Evaluation

Process evaluation focused on how the E-portfolio-based learning was carried out in real classroom practice. It examined instructional strategies, teacher–student interaction, student participation, and the consistency of E-portfolio use. Stufflebeam (2003) emphasizes that process evaluation helps monitor implementation and identify areas needing immediate improvement. Data were gathered through:

a. Direct classroom observations to monitor teaching and learning activities.
b. Content analysis of students' E-portfolios, which allowed researchers to track learning progress and reflective engagement.
c. Interviews and FGDs to capture experiences, perceptions, and implementation challenges.

This stage provided a realistic and contextual understanding of how the program functioned beyond formal planning.

Product Evaluation

The product evaluation assessed the outcomes and overall impact of E-portfolio-based learning. It examined improvements in students' English language skills, comprehension, engagement, and learning attitudes. In the CIPP framework, product evaluation measures both intended and unintended outcomes to support future decision-making (Stufflebeam & Shinkfield, 2007). Data were collected through:

- Questionnaires to measure students' responses and perceived learning gains.
- Analysis of E-portfolios to evaluate demonstrated competencies and achievement.
- Interviews to gather reflective insights from both students and the teacher regarding learning impact.

By integrating statistical findings with qualitative reflections, the study ensured a balanced interpretation of results, consistent with mixed-method principles (Creswell & Plano Clark, 2018).

Data Analysis and Trustworthiness

The data in this study were analyzed using both quantitative and qualitative procedures in line with the mixed method design.

Quantitative Data Analysis

Quantitative data obtained from questionnaires were analyzed using descriptive statistics with the assistance of SPSS software. Descriptive statistical analysis was used to calculate frequencies, percentages, means, and standard deviations in order to describe students' responses and perceptions of E-portfolio-based learning (Creswell & Creswell, 2018).

Before analysis, the instruments were tested for validity and reliability. Item validity was examined using correlation analysis, while reliability was measured using Cronbach's Alpha coefficient. According to Hair et al. (2019), an instrument is considered reliable if the Cronbach's Alpha value exceeds 0.70. These

procedures ensured that the quantitative findings were statistically sound and consistent.

Qualitative Data Analysis

Qualitative data derived from interviews, observations, and Focus Group Discussions (FGDs) were analyzed using the interactive model proposed by Miles, Huberman, and Saldaña (2014), which consists of three main stages:

1. Data Reduction – selecting, focusing, and simplifying relevant data.
2. Data Display – organizing information in a structured form to facilitate interpretation.
3. Conclusion Drawing and Verification – interpreting patterns and confirming findings through continuous reflection.

This analytical process allowed the researcher to identify meaningful themes related to the implementation and impact of E-portfolio-based learning.

Data Trustworthiness

To ensure the credibility and trustworthiness of the findings, several strategies were applied. First, triangulation of sources and techniques was conducted by comparing data obtained from students, teachers, and experts, as well as from questionnaires, interviews, observations, and portfolio analysis (Lincoln & Guba, 1985). This approach strengthened the consistency and depth of interpretation.

Second, the research instruments were reviewed and validated by experts in English language education, digital learning, and educational evaluation to ensure content validity. Third, statistical tests of validity and reliability were performed to confirm the accuracy and consistency of the quantitative instruments.

Through these procedures, the study ensured that the findings were credible, dependable, and academically accountable.

Results

Context

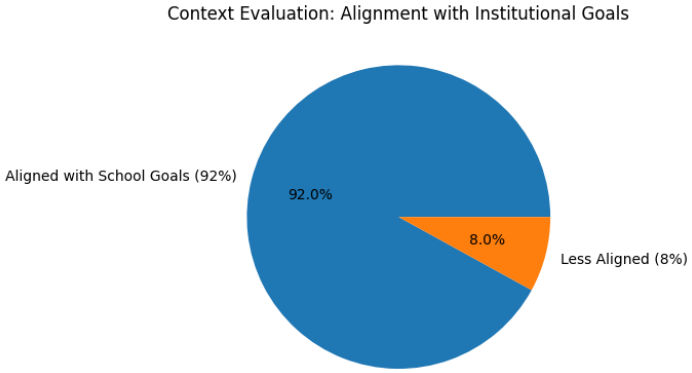
The findings from the context evaluation indicate that the implementation of E-portfolio-based learning is well aligned with the institutional goals of SMP Negeri 2 Sidareja, particularly in enhancing students' English proficiency in a comprehensive manner. The school recognizes the importance of integrating Information and Communication Technology (ICT) to create a learning environment that is innovative, adaptive, and relevant to students' real-world needs.

The learning environment at the school demonstrates openness toward educational innovation. Increasing levels of students' digital literacy have become a strong foundation for implementing E-portfolios in English instruction. Based on interview data, both the English teacher and the principal emphasized that the program supports technology-based educational policies promoted within the Merdeka Curriculum framework. They believe that integrating E-portfolios not

only strengthens language skills but also develops students' digital competencies and reflective learning habits.

Overall, from the context perspective, the school environment, policy direction, and stakeholder commitment provide strong justification for sustaining and further developing E-portfolio-based English learning.

Figure 2. Context Evaluation Result



Input

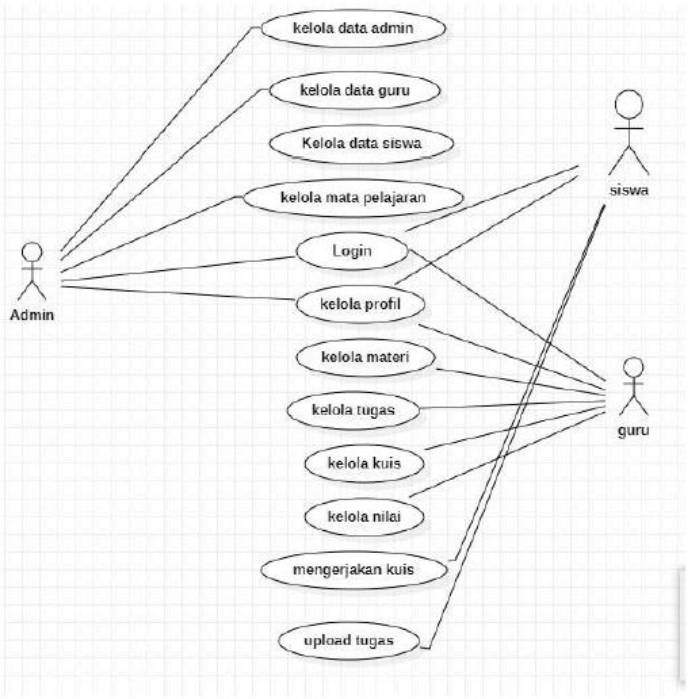
In terms of input evaluation, the findings reveal that SMP Negeri 2 Sidareja has met the fundamental requirements for implementing E-portfolio-based learning. The school provides essential technological infrastructure, including computers, laptops, projectors, and internet access, which are accessible to both teachers and students. These facilities play a crucial role in supporting the consistent use of digital portfolios during the learning process.

Additionally, the English teacher has participated in foundational training on the integration of digital platforms in classroom instruction. As a result, the teacher is able to operate E-portfolio applications effectively and guide students in uploading, organizing, and reflecting on their work. This technical readiness contributes significantly to smooth implementation.

Questionnaire results further strengthen these findings: 89% of teachers and students expressed satisfaction with the available facilities and technological support. Institutional backing also plays an important role. The principal and curriculum coordinator actively encourage technology-based learning development by allocating time for professional development and conducting periodic supervision.

From the input perspective, the combination of adequate infrastructure, teacher preparedness, and institutional support creates a solid foundation for the successful implementation of E-portfolio-based English learning.

Figure 3 Use Case



Process

From the process perspective, the implementation of E-portfolio-based learning was carried out consistently throughout English classroom activities. Students were actively involved in uploading assignments, writing reflections about what they had learned, and organizing their digital portfolios as evidence of their progress. Based on classroom observations, students appeared more enthusiastic and engaged when learning activities incorporated digital tools. The use of E-portfolios seemed to make the learning experience more interactive and meaningful.

During the implementation, the teacher played an important role as a facilitator rather than merely a knowledge provider. The teacher provided constructive feedback on students' work and guided them in reflecting on their own learning progress. Interviews revealed that the teacher felt increasingly confident in integrating digital media into instruction, particularly in managing online components of the learning process. This growing confidence contributed positively to the smooth execution of the program.

From a quantitative standpoint, there was a clear improvement in students' perceptions of E-portfolio use. Before the program was fully implemented, 67% of students expressed positive perceptions (M = 2.68), indicating a moderately positive attitude. After consistent implementation, positive responses increased significantly to 98% (M = 3.85). This shift suggests that students not only adapted well to the digital approach but also developed a stronger appreciation for its benefits. Overall, the findings demonstrate that the learning process became more engaging, structured, and supportive of student participation.

Table 1. Students' Perceptions Before and After Full Implementation of E-Portfolio-Based Learning

Implementation Stage	Positive Perception (%)	Mean Score (M)	Interpretation
Before Implementation	67%	2.68	Moderately Positive
After Implementation	98%	3.85	Highly Positive
Increase	+31%	+1.17	Significant Growth

As shown in Table 1, there was a 31% increase in positive student perceptions, along with a notable rise in the mean score. This improvement reflects how consistent and well-supported implementation of E-portfolio-based learning can strengthen student engagement and foster more positive attitudes toward English learning.

Product

The findings from the product evaluation show that the use of E-portfolios made a meaningful contribution to students' learning outcomes. Students demonstrated a clearer understanding of English materials, and improvements were observed in their writing, speaking, and critical thinking skills. Through the digital portfolio system, students actively reflected on their learning progress, identified their mistakes, and revised their work independently. As a result, stronger self-awareness and learning responsibility were developed.

Improvements in students' performance were also reflected in the quality of their submitted tasks. More structured writing, more confident speaking performances, and deeper analytical responses were observed during classroom activities. These improvements were not achieved instantly; rather, they were gradually developed as students consistently engaged with reflective portfolio tasks.

From the teacher's perspective, more organized and comprehensive assessment data were generated through the use of E-portfolios. Students' progress could be monitored more systematically, and formative feedback could be provided more effectively. Instead of relying solely on summative tests, continuous evidence of learning was documented and reviewed. This made the assessment process more transparent and meaningful.

Students also expressed that learning became more interesting and motivating. Their progress could be directly monitored, and a sense of achievement was experienced when improvements were seen in their portfolios. Greater focus and responsibility were shown during classroom activities, as students were aware that their work would be recorded and evaluated continuously.

Figure 4 Student Account

Figure 5 Admin Account

Discussion

The findings of this study confirm that E-portfolio-based English learning was implemented effectively across the four CIPP dimensions: context, input, process, and product. The program was not only introduced as a technological innovation, but it was also applied as a pedagogical strategy to enhance students' engagement and learning outcomes. Clear alignment between school policy and classroom practice was observed, and institutional goals were supported through the integration of digital learning tools.

From the context dimension, strong institutional support was demonstrated. The school actively promoted the integration of technology in teaching and learning, and E-portfolios were adopted as part of this broader vision. A learning environment that welcomes innovation was created, and digital literacy was gradually strengthened among students. As a result, the program was implemented within a supportive and forward-looking educational setting.

In terms of input, adequate facilities were provided, and teacher readiness was developed through training and professional support. Computers, internet access, and digital platforms were made available to facilitate the learning process. At the same time, instructional strategies were adjusted to suit the digital

format. When sufficient resources were supplied and teachers were properly guided, smoother implementation was achieved. The high satisfaction rate (89%) indicates that the foundational support system was perceived as adequate by most participants.

The process findings show that student engagement was significantly increased. Students actively uploaded assignments, reflected on their work, and organized their digital portfolios. As they became more familiar with the platform, stronger confidence and participation were demonstrated. The teacher facilitated the learning process by providing feedback and guiding reflection, while students were encouraged to evaluate their own progress. Positive perceptions rose from 67% to 98%, and greater motivation was observed throughout classroom activities. These improvements were not achieved instantly; rather, they were gradually developed through consistent practice and structured guidance.

From the product perspective, improvements in academic performance and learner autonomy were identified. Better writing organization was demonstrated, more confident speaking performances were observed, and deeper critical responses were produced by students. Through reflective activities, learning progress was monitored, mistakes were identified, and revisions were completed independently. Continuous formative assessment was supported by well-documented portfolio evidence, and more structured feedback was provided by the teacher. As a result, assessment became more transparent and meaningful.

Overall, E-portfolio-based learning enhanced not only measurable outcomes but also students' responsibility and self-awareness. A more student-centered learning atmosphere was created, and reflective thinking skills were strengthened. Although positive results were achieved, continuous development should be maintained. Ongoing teacher training must be supported, digital infrastructure should be sustained, and program evaluation needs to be conducted regularly to ensure long-term effectiveness.

Conclusion

Based on the findings of this study, it can be concluded that the implementation of E-portfolio-based English learning at SMP Negeri 2 Sidareja was effective and aligned with the intended program objectives. This conclusion was drawn from the four components of the CIPP evaluation model: Context, Input, Process, and Product.

1. Context

   The E-portfolio program was implemented in strong alignment with the school's institutional goals, particularly in improving students' English competence comprehensively. The program was designed to address 21st-century learning needs, which emphasize communication skills, creativity, and technology integration. A supportive learning environment was created, and digital innovation was welcomed by both teachers and students.

   Adequate facilities were prepared, and openness toward instructional innovation was demonstrated. Students' digital literacy has gradually increased, and a strong foundation for the integration of E-portfolios has been

established. Through this platform, language skills were expressed, self-reflection was encouraged, and learning progress was continuously documented.

2. Input

   The availability of infrastructure at SMP Negeri 2 Sidareja was considered sufficient to support E-portfolio-based English learning. Technological devices such as computers, laptops, and stable internet access were provided and were optimally utilized during classroom activities. A conducive digital learning environment was therefore created.

   Support from stakeholders played a crucial role in ensuring program sustainability. The English teacher showed readiness and willingness to adopt innovative instructional approaches. Policy support was provided by the principal and curriculum coordinator, and necessary training was facilitated. Through collaboration among stakeholders, the continuity and effectiveness of E-portfolio implementation were strengthened.

3. Process

   The implementation process was carried out consistently and systematically. Students actively uploaded assignments, documented their learning outcomes, and reflected on the development of their skills. Through these activities, greater learning responsibility was developed, and students' independence and metacognitive awareness were strengthened.

   At the same time, digital technology was effectively integrated into instructional strategies. The teacher's confidence in managing technology-based learning was increased, and online learning tools were utilized more effectively. Quantitative findings further support this conclusion, as positive student perceptions increased significantly from 67% (M = 2.68) to 98% (M = 3.85). This substantial improvement indicates that the implementation process successfully created a more engaging and meaningful learning experience.

4. Product

   The implementation of E-portfolio-based learning produced positive outcomes in students' academic performance. Improvements were observed in students' understanding of English materials, active participation, and communication skills, both oral and written.

   Through the use of E-portfolios, learning outcomes were not merely stored but were continuously reflected upon and refined. Stronger conceptual understanding and critical thinking skills were developed as students engaged in ongoing reflection. A more personal and meaningful learning experience was created because students were directly involved in managing and evaluating their own learning progress.

Overall, the use of E-portfolios improved instructional quality and supported the achievement of English learning objectives in a more effective and innovative manner.

References

Bruner, J. S. (1966). *Toward a theory of instruction*. Harvard University Press.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.

Kholidiyah, N., Murtadho, F., & Mahliatussikah, H. (2023). The effect of portfolio-based assessment on students' learning independence and language skills. *Journal of Language Teaching and Research, 14*(2), 345–353.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

M. Mustangin and B. Riswanto, "The challenges and opportunities: CIPP model for TEFL evaluation following the COVID-19 pandemic," *Jurnal Teknologi dan Bisnis*, 2020. [Online]. Available: https://www.academia.edu

M. Mustangin, "Improve student engagement and collaboration with Kahoot!," *Jurnal Teknologi dan Bahasa*, 2021. [Online]. Available: http://ejurnal.stmikkomputama.ac.id

Magdalena, I., et al. (2023). Portfolio-based assessment in improving students' learning outcomes. *International Journal of Educational Research Review, 8*(1), 45–54.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.

Ministry of Education, Culture, Research, and Technology. (2022). *Kurikulum Merdeka framework*. Government of Indonesia.

Redecker, C. (2017). *European framework for the digital competence of educators: DigCompEdu*. Publications Office of the European Union.

Spiro, R. J., Feltovich, P. J., Jacobson, M. J., & Coulson, R. L. (1988). Cognitive flexibility theory: Advanced knowledge acquisition in ill-structured domains. In V. Patel (Ed.), *Proceedings of the 10th annual conference of the Cognitive Science Society* (pp. 375–383). Lawrence Erlbaum Associates.

Strohmeier, S. (2010). Student e-portfolios: Perspectives and challenges. *Journal of Educational Technology Systems, 38*(4), 405–423.

Stufflebeam, D. L. (2003). The CIPP model for evaluation. In T. Kellaghan & D. L. Stufflebeam (Eds.), *International handbook of educational evaluation* (pp. 31–62). Kluwer Academic Publishers.

Stufflebeam, D. L. (2007). *CIPP evaluation model checklist: A tool for applying the CIPP model to assess projects and programs*. Western Michigan University, Evaluation Center.

Stufflebeam, D. L., & Coryn, C. L. S. (2014). *Evaluation theory, models, and applications* (2nd ed.). Jossey-Bass.

Stufflebeam, D. L., & Shinkfield, A. J. (2007). *Evaluation theory, models, and applications*. Jossey-Bass.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Wiggins, G. (1998). *Educative assessment: Designing assessments to inform and improve student performance*. Jossey-Bass.

Wulandari, D., Suryoputro, G., & Mulyono, H. (2024). The use of Facebook as an e-portfolio platform to enhance students' speaking engagement. *Indonesian Journal of Applied Linguistics, 14*(1), 112–123.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2