

The Student's Perception in Using Trello as A Learning Media to Support E-Portfolio Based Learning

I Putu Yoga Laksana^{1✉}, I Gusti Ayu Putu Dewi Paramita², Ni Nyoman Yuliantini³, Ni Wayan Sadiyani⁴

Politeknik Negeri Bali¹²³⁴

✉Address correspondence: Kampus Bukit Jimbaran

E-mail: yoga.laksana@pnb.ac.id

Abstract - This study aims at evaluating students' perceptions of using the Trello application as a learning media to support e-portfolio based learning. The research employs a survey method to assess students' perspectives on the usefulness and ease of use of Trello for organizing course materials, managing assignments, and developing their digital portfolios within a blended learning environment. The participants are the students of International Business Management study program who are following the English for Specific Course named English for Business which implementing Trello-supported e-portfolio based blended learning. Data is collected through questionnaires distributed via Google Forms. The results indicate that use of the Trello application in e-portfolio based blended learning can enhance student engagement and participation, as well as aid students in developing their digital portfolios. In conclusion, employing the Trello application as a supporting tool for e-portfolio based blended learning provides an effective and innovative approach to improving the quality of learning. The study recommends integration of Trello to facilitate students' learning organization and digital portfolio management as an alternative model for future educational practices. Further research could examine the impact on specific learning outcomes.

Keywords: E-portfolio, Blended Learning, Trello, Learning Media, Students' Perception

1. INTRODUCTION

Technology and digital-based education are currently becoming a global trend. E-portfolios have emerged as one form of rapidly developing learning. According to Cepik & Yastibas (2013), e-portfolios are digital containers that can be utilized to store, record, and share student works or assignments online. E-portfolios have become an effective way to facilitate student reflection and metacognition, as well as provide opportunities for students to demonstrate their abilities in diverse and creative ways. Moreover, the use of e-portfolios as an approach in the learning process is deemed necessary to be applied in online or blended learning methods. E-portfolios are believed to be able to improve students' soft skills, nurture critical thinking patterns in solving problems, and assist them in independent learning and continuous learning processes. This is also supported by several experts who state that e-portfolios help students independently design effective learning for themselves and their future learning goals related to their careers as well as improving their English competencies (Klenowski et al (2006); Gülbahar & Tinmaz (2006); Bolliger & Shepherd (2010); Huang et al (2011); Cepik & Yastibas (2013); Nurhayati & Sumbawati (2014); Wetcho & Na-Songkhla (2019), Nourdad & Banagozar (2022) and Wu (2023)).

The implementation of e-portfolios in blended vocational learning, which emphasizes student development through practice and producing work-ready graduates, is well-suited for this context. As asserted by Mobarhan et al (2015) and Ciesielkiewicz (2019), e-portfolios can serve as tools for career development and honing employability skills before entering the workforce. This aligns with Wakimoto & Lewis (2014) findings that graduate students in counseling or psychology programs welcomed e-portfolios for career advancement and job searching, with 86% planning to share their e-portfolio with prospective employers.

Additionally, several studies demonstrate the benefits of e-portfolios for improving English vocabulary acquisition as a foreign language. Research by Nourdad & Banagozar (2022) found e-portfolio assessment had a significantly positive effect on Iranian students' vocabulary learning and retention. Another study by Wu (2023) showed Taiwanese students had positive experiences and attitudes toward English situational writing e-portfolios, with most enthusiastic about the learning, cooking, and web media production, and only a few skeptical or rejecting. In summary, e-portfolio implementation can provide lasting career development impacts for vocational students. Studies have proven e-portfolio benefits for building skills like vocabulary mastery. The Introduction should provide relevant historical context and bring in any theory considered relevant to the issue being raised in the study. To this end, the author should summarize and reference a number of past studies and/or opinions to lead the reader to

the study being reported on in the article. The Introduction should not exceed 15% of the total length of the entire article.

However, implementing e-portfolios in learning also poses some challenges. One major obstacle is the difficulty in managing the tasks and information provided by instructors, especially when students are given numerous complex assignments. This often overwhelms students and impedes effective and efficient task completion. To mitigate this issue, one potential solution is utilizing the Trello project management application to organize e-portfolios. Trello is an app that assists users in efficiently coordinating tasks and information. In an educational context, employing Trello can aid students in organizing instructor-assigned tasks and details, thereby enhancing learning effectiveness and efficiency. Specifically, Trello allows students to create digital boards to visualize their assignments. Tasks can be categorized into lists and cards with priorities, due dates, descriptions, attachments, and comments. This system promotes task segmentation, prioritization, and progression monitoring. Additionally, Trello facilitates collaboration by allowing multiple users to access and interact with the boards. Hence, Trello can empower students to take ownership of their learning by providing an efficient and collaborative e-portfolio management system.

2. METHOD

This study employs a qualitative case study approach to investigate students' perceptions of using Trello as a learning media to support e-portfolio based learning. The following sections outline the key elements of the research methodology.

2.1 Research Design

This study utilizes a qualitative approach with a case study design to closely examine students' perceptions of using Trello to support e-portfolio based learning. The case study enables an in-depth analysis of this issue within a real-world context (Creswell & Creswell, 2017).

2.2 Research Population and Sampling

The target population comprises vocational students in their second semester of a business administration program at a particular institution. Purposive sampling is used to select participants based on the study criteria. The sample includes 77 students from 3 classrooms who completed a questionnaire. Additionally, 9 students participated in follow-up interviews.

2.3 Instruments and Data Collection

Data is collected through a questionnaire and semi-structured interviews (Creswell & Poth, 2016). The questionnaire gauges' students' perceptions of using Trello integrated with e-portfolios for teaching and learning. Interviews supplement the questionnaire data by providing more detailed qualitative insights.

2.4 Data Analysis

Quantitative questionnaire data is analyzed using descriptive statistics to summarize students' perceptions. Interview transcripts are analyzed via thematic analysis to identify key themes related to the research questions (Braun & Clarke, 2019). Triangulation of the quantitative and qualitative data sources will enhance the rigor of the analysis.

In summary, this qualitative case study utilizes a questionnaire and interviews to explore students' perspectives on leveraging Trello to support e-portfolio learning. Mixed methods data analysis will provide a comprehensive understanding of this phenomenon within the given vocational education context.

3. RESULTS AND DISCUSSION

The results of the analysis of implementing an e-portfolio learning model with the Trello application demonstrate a high level of success in improving student learning in the English for Interpersonal Communication course. In the assessment of eleven relevant aspects, this model yielded positive results across most criteria. The score results reveal that students achieved good attainment on numerous assessment benchmarks. Specifically, the e-portfolio and Trello integration enabled students to actively and collaboratively document and share their learning processes and outcomes. This enhanced their metacognitive skills, content mastery, and technology proficiency. Students also reported increased motivation and engagement with the course material. Additionally, the model provided opportunities for continuous instructor feedback and self-reflection. While further refinements may maximize outcomes, overall, the e-portfolio learning model with Trello meaningfully enriched student achievement and the learning experience in this course.

Figure 1. Results of the Analysis of Implementing an E-Portfolio Learning Model Supported by Trello

The analysis of implementing the e-portfolio learning model with the Trello application demonstrates positive outcomes across most assessed criteria. Firstly, the Content aspect (Score: 82.02) reflects the quality and relevance of the learning materials presented through the e-learning platform. The high score signifies the course resources provided students with robust comprehension of the topics. Well-designed, meaningful content builds a solid knowledge foundation before advancing to the next learning stage. The strong evaluation indicates the materials were effectively developed to enrich students' understanding of interpersonal language. This underscores the importance of continuously updating the content to align with the latest developments in English communication.

Secondly, the Reflection aspect (Score: 81.55) shows the extent to which students critically reflected on their video roleplay quality. The high mark denotes students evaluated their project strengths and weaknesses and formulated improvement strategies. This reflection enables honing speaking skills by identifying language proficiency gaps. The positive Reflection rating also demonstrates students' commitment to enhancing their speaking capabilities through objective, constructive self-assessment. Further guidance on effective reflection techniques could empower students to devise more targeted, concrete improvement plans.

Thirdly, the Organization aspect (Score: 80.08) measures how well students structured and managed their e-portfolio project. Despite the high score indicating good organizational effort, this area can be improved by providing further support on

effective time and resource management. The strong Organization evaluation highlights students achieved tidy content and task arrangement within the Trello app. However, it also underscores the importance of efficient project management and deadline awareness when developing e-portfolios.

Next, the Creativity aspect (Score: 81.86) gauges the uniqueness and innovation students brought to their e-portfolio. The high rating signifies students displayed creativity in their roleplay videos and group presentations. Students who infused fresh, engaging ideas within the interpersonal communication context exhibited high creativity. This motivates thinking beyond conventional boundaries and integrating creative elements into e-portfolio projects. Instructors can further inspire creative exploration of relevant concepts in teaching and presentations.

Additionally, the Engagement aspect (Score: 84.03) denotes student involvement and participation in the e-portfolio learning. The excellent rating reflects a high level of engagement across learning stages, peer feedback provision, and collaborative processes. This signals the Trello-supported e-portfolio model successfully fostered an interactive, collaborative environment. Actively engaged students tend to be more motivated to learn and hone their English abilities. The high Engagement score also shows this model cultivated a collaborative spirit among students, which can amplify group project productivity and constructive feedback exchange.

Moreover, the Trello Application aspect (Score: 82.09) evaluates how effectively this tool enabled collaborative e-portfolio task and project management. The good score indicates students were comfortable utilizing Trello as a platform for cooperation and organizing their work. Trello streamlined collective task tracking and project monitoring. This outcome highlights Trello's contribution to enhancing learning efficiency. However, it also underscores the need to provide further training and guidance on the app usage for students less adept with technology and digital collaboration.

Additionally, the Overall Experience aspect (Score: 82.79) captures students' perceptions of the overall e-portfolio learning journey supported by Trello. The positive rating signifies satisfaction across areas like collaboration, creativity, instructor support, and peer interactions. This suggests the model successfully created an enjoyable, meaningful, and empowering learning environment.

Moreover, the Assessment aspect (Score: 82.79) reflects the quality of instructor feedback and evaluation of student e-portfolios. The high score denotes constructive, supportive feedback that guided improvement. Effective assessment from instructors assists students in identifying project strengths and weaknesses alongside strategies to

advance their English abilities. This also plays a key role in boosting student motivation and confidence to tackle learning challenges. The positive Assessment outcome can encourage sustained student commitment to developing English speaking skills.

Furthermore, the Collaboration aspect (Score: 89.22) measures the success of student cooperation on the video roleplay and group presentations. Effective collaboration is integral for producing creative, high-quality projects. The excellent score here indicates students forged supportive, cooperative dynamics to develop their e-portfolio work. Robust peer collaboration enriches the learning experience and amplifies creativity in conveying messages in English.

On the other hand, the Technical Issues aspect (Score: 65.81) reflects challenges students faced with Trello application usage. The lower score suggests some experienced technical barriers that may have detracted from the learning experience. Though not yet optimal, this draws attention to ensuring smoother, obstacle-free learning. Moving forward, it is vital to provide technical support and further guidance to assist students facing application difficulties.

Finally, the Improvements aspect (Score: 77.21) evaluates students' ability to identify and implement project enhancements based on feedback. The good score signifies students were responsive to instructor and peer input for refinement. This improvement process enables continuously advancing English proficiency and achieving better outcomes. The high aspect rating also shows students can learn from errors and better integrate feedback. Overall, the Improvements aspect motivates students to continually enhance the quality and creativity of their e-portfolio work.

This comprehensive analysis of an e-portfolio learning model integrated with the Trello application provides valuable insights into optimizing technology-supported collaborative learning. The largely positive outcomes across assessed criteria indicate this approach can enrich student engagement, peer collaboration, creativity, and overall experience. However, the research also highlights key areas needing attention, particularly providing technical guidance and enhancing project organization and reflection techniques. The findings emphasize that while digital tools like Trello facilitate efficient collaboration, student-centered instructional design and ongoing support remain imperative for meaningful learning. Ultimately, this study demonstrates the promise of thoughtfully leveraging tools like Trello to build interactive e-portfolio learning environments, while underscoring the continued importance of student empowerment and human connection in digitally mediated education.

4. CONCLUSION

This study reveals positive student perceptions of using Trello integrated with e-portfolio based learning, demonstrating Trello's potential as a collaborative learning technology. Students reported increased engagement, motivation, creativity, and satisfaction with Trello facilitating organization, progress tracking, and cooperation in interactive e-portfolio building. However, some faced technical difficulties, highlighting the need for ongoing guidance to optimize Trello's benefits. While Trello can powerfully support student collaboration and learning outcomes, instructor support and thoughtful integration remain vital. Overall, the research provides valuable insights on leveraging Trello to promote empowered, socially connected learning, though further work is needed to address limitations. This contributes implications for strategic implementation of tools like Trello to enrich technology-enhanced, student-centered education.

REFERENCES

- Bolliger, D. U., & Shepherd, C. E. (2010). Student perceptions of ePortfolio integration in online courses. *Distance Education*, 31(3), 295–314.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597.
- Cepik, S., & Yastibas, A. E. (2013). The use of e-portfolio to improve English speaking skill of Turkish EFL learners. *The Anthropologist*, 16(1–2), 307–317.
- Ciesielkiewicz, M. (2019). The use of e-portfolios in higher education: From the students' perspective. *Issues in Educational Research*, 29(3), 649–667.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Gülbahar, Y., & Tinmaz, H. (2006). Implementing project-based learning and e-portfolio assessment in an undergraduate course. *Journal of Research on Technology in Education*, 38(3), 309–327.
- Huang, J. J. S., Yang, S. J. H., & Chang, M. C. W. (2011). The effect of ePortfolio satisfaction on students' learning motivation and Internet self-efficacy. *Journal of Educational Technology Development and Exchange (JETDE)*, 4(1), 10.
- Klenowski, V., Askew, S., & Carnell, E. (2006). Portfolios for learning, assessment and professional development in higher education. *Assessment & Evaluation in Higher Education*, 31(3), 267–286.
- Mobarhan, R., Rahman, A. A., & Majidi, M. (2015). Electronic portfolio motivational factors from students' perspective: A qualitative study. *Knowledge Management & E-Learning: An International Journal*, 7(2), 265–279.
- Nourdad, N., & Banagozar, M. A. (2022). The Effect of E-Portfolio Assessment on EFL Vocabulary Learning and Retention. *Indonesian Journal of Applied Linguistics*. <https://doi.org/10.17509/ijal.v12i2.44232>
- Nurhayati, F. R., & Sumbawati, M. S. (2014). Pengembangan E-Portfolio Sebagai Instrumen

- Penilaian Siswa Di Smk Negeri 2 Lamongan. *Jurnal Pendidikan Teknik Elektro*, 3(1).
- Wakimoto, D. K., & Lewis, R. E. (2014). Graduate student perceptions of eportfolios: Uses for reflection, development, and assessment. *The Internet and Higher Education*, 21, 53–58.
- Wetcho, S., & Na-Songkhla, J. (2019). The Different Roles of Help-Seeking Personalities in Social Support Group Activity on E-Portfolio for Career Development. *International Journal of Emerging Technologies in Learning*, 14(2).
- Wu, C. (2023). *EFL Students ' Experiences and Attitudes Toward Situated e-Portfolio English Writing*. 9(2), 225–238.