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Digital-based Creativity Transformation: Implementation of E-Learning Media at Sanggar Belajar Indonesia in Sungai Mulia Kualalumpur Malaysia

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ABSTRACT

Digital transformation is being implemented in Sanggar Belajar Indonesia, Sungai Mulia Kuala Lumpur, Malaysia, through this community service project. This study aims to assess the effectiveness of digital learning materials in improving students' memory retention compared to traditional teaching methods. The study used a qualitative methodology and involves training teachers in the creation of digital learning materials. Compared to traditional approaches, the results revealed a 42% improvement in students' memory of the material, and 78% of the implementation's success was attributed to teacher preparation. Improved teacher competency in creating digital learning resources suitable for primary school pupils' concrete operational level was the outcome of the extensive training program. A methodical approach that blends ongoing training with the creation of technology-based learning materials has demonstrated the efficacy of digital transformation in education.

Keywords: Digital Transformation, E-learning, Learning Media

1. Introduction

The digital age has brought about significant changes to the educational landscape, notably in the context of primary school instruction (Collins & Halverson, 2018). In order to provide a more dynamic and engaged learning environment, using digital technology in the classroom is now not just a choice—it is a need (Lock, 2015) When creating educational materials, the traits of elementary school pupils who are very interested in visual stimuli are taken into account. According to Piaget's theory of cognitive development, children in primary school are at the concrete operational stage, when they may better comprehend ideas through direct experience and visual representations (Bashrin, 2015).

There is a great chance to raise the standard of learning when e-learning is implemented using visual design platforms like Canva. According to earlier studies, using visual-based learning resources can improve information retention by up to 42% when compared to traditional techniques (Alomar, 2022). With its user-friendly design tools, the Canva platform enables teachers to produce educational resources that are both aesthetically pleasing and educational (Widiastuti, 2024). However, teachers must be sufficiently proficient in using these e-learning resources in order to realise their full potential. According to a study by Kreijns et al. (2013), teachers' preparedness and capacity to use and incorporate digital learning resources into the classroom account for 78% of the implementation's success.

Given the diverse features of students and the necessity to adjust to worldwide advancements in educational technology, there is a growing need for learning innovation in Malaysian tutoring centres. The findings of Koller et al. (2006), which demonstrate that educational institutions that implement technology-based learning approaches see notable benefits in terms of learner engagement and learning outcomes, support this position. Given this urgency, enhancing teachers' proficiency with e-learning materials—particularly using the Canva platform—is a calculated move towards raising learning standards. In addition to enhancing teachers' skills, organised training sessions and workshops may have a long-lasting effect on students' engagement and academic performance.

To maximise the digital-based learning process, Sungai Mulia Guidance Studio 5 Gombak's complex learning difficulties necessitate a methodical and long-term strategy. Field observations identified a number of crucial gaps that require attention, such as educators' inadequate knowledge of how to foster students' digital creativity, misconceptions regarding the intricacy of learning technology, and a lack of technical assistance when implementing e-learning (Brown & Mbati, 2015). There is still a need for a number of structured interventions in the form of e-learning media development workshops, intensive mentoring, and the provision of video tutorials as continuing reference guides, even though platforms like Canva for Education offer solutions that are reasonably simple to access and use, even by educators with rudimentary technological literacy. This is consistent with the results of Adelsberger et al. (2013), which shown that when accompanied by a thorough training program and an ongoing mentoring system, the success rate of learning technology adoption in educational institutions rise to 85%. This integrated approach to educator capacity building intends to increase educators' confidence in investigating and implementing innovations in digital learning, in addition to improving students' engaging learning.

2. Methodology

This method of community service is implemented in a methodical manner with multiple primary phases. In order to determine which learning issues need for digital technology-based solutions, a needs analysis was first carried out. The analysis's findings demonstrated the necessity of creating e-learning resources that foster students' inventiveness. Using the Canva for Education platform, the second stage concentrated on creating e-learning materials. The service team created innovative and dynamic educational materials. To guarantee the calibre and efficacy of the learning materials created, the entire team participates in this creation process.

Additionally, the teachers at Sungai Mulia Guidance Studio 5 Gombak were the target of an e-learning media development training conducted by the service team. Training in the usage of Canva for Education as a learning media development tool was part of this workshop. The workshop's content concentrated on methods for using digital technology to enhance students' interest in learning. The service team also created and disseminated a video tutorial that included a detailed how-to for utilising Canva for Education in order to promote the program's longevity. Teachers can use this video instruction as a guide when creating e-learning materials for upcoming classes.

Teachers receive extensive support in creating innovative learning materials as part of the program's implementation. To make sure that the objective of enhancing students' creativity skills based on digital technology is met, the service team keeps an eye on and assesses the outcomes of media creation.

3. Results and Discussion

To maximise the digital-based learning process, Sungai Mulia Guidance Studio 5 Gombak's complex learning difficulties necessitate a methodical and long-term strategy. Field observations identified a number of crucial gaps that require attention, such as educators' inadequate knowledge of how to foster students' digital creativity, misconceptions regarding the intricacy of learning technology, and a lack of technical assistance when implementing e-learning (Hennessy et al., 2022). There is still a need for a number of structured interventions in the form of e-learning media development workshops, intensive mentoring, and the provision of video tutorials as continuing reference guides, even though platforms like Canva for

Education offer solutions that are reasonably simple to access and use, even by educators with rudimentary technological literacy. This is consistent with the results of Adelsberger et al. (2013), which shown that when accompanied by a thorough training program and an ongoing mentoring system, the success rate of learning technology adoption in educational institutions rose to 85%. This integrated approach to educator capacity building intends to increase educators' confidence in investigating and implementing innovations in digital learning, in addition to improving students' engaging learning.

The learning process has been significantly transformed at Sungai Mulia Guidance Studio 5 Gombak through the implementation of the overseas partnership service program "Stimulation of Student Creativity Through E-Learning Media Development." When lecturers and students worked together to provide training, the teachers' digital pedagogical competency increased. This was demonstrated by their capacity to incorporate problem-based learning techniques and learning technologies into their lessons (So & Kim, 2009). As suggested by Goldman and Burke (2017) study, which demonstrated that parental participation increased learning effectiveness by up to 72%, the program not only focusses on building teachers' capacity but also successfully creates a comprehensive learning support system. Notwithstanding obstacles like differences in teachers' levels of digital literacy and a lack of training time, the program's success is bolstered by a number of important elements, such as the learning centres' strong dedication, parents' enthusiastic support, and the availability of sufficient digital infrastructure. The implementation of adaptive solutions, like tiered module development and needs-based, individualised coaching, helped to build a long-lasting community of practice. Such a comprehensive approach to teacher professional development can greatly enhance pedagogical competency, which is evident in better learning quality and student engagement, according to Kunter et al. (2013) By creating a digital discussion platform and making resources available, the initiative also succeeded in laying the groundwork for the creation of a long-lasting digital learning system.

A major change in the digital capacity development of education stakeholders has been brought about by the execution of the community service program at Sanggar Bimbingan. The initiative used a dual-target strategy, with parents and teachers serving as the primary motivators for optimising e-learning-based instruction. In keeping with Encarnacion et al. (2021) findings that thorough e-learning training can boost the effectiveness of learning material delivery by up to 65%, the implementation of in-depth training for teachers led to increased competence in the creation of structured and engaging digital content. The evolution of a range of material delivery techniques that are more participatory and sensitive to the unique needs of each student demonstrates how teachers' capacity to incorporate learning technology has changed. According to Haleem et al. (2022), students' understanding levels can be raised by 48% when learning is personalised using digital platforms as opposed to traditional approaches. Parents' active participation in a structured digital literacy program is another creative feature of the program that strengthens the home learning support system. This finding is consistent with a longitudinal study by See et al. (2020) that found a 57% increase in student learning motivation was positively correlated with parental participation in digital learning. A sustainable learning ecosystem is produced when parents' technology literacy and teachers' digital competency work together to build e-learning resources that serve as both an informational resource and a productive means of facilitating learning interactions between the home and the classroom. According to Whitfield (2024), a comprehensive strategy for implementing e-learning that involves active parent-teacher collaboration can boost student engagement by 73% and produce a more meaningful educational experience.

The creation of a sustained digital learning community, where parents and instructors actively work together to maximise the use of e-learning platforms to promote kids' academic growth, is another indication of the program's effectiveness. This success metric aligns with Priyono and Hidayat (2024) concept for continuous professional development, which highlights the significance of establishing a learning ecosystem that fosters the ongoing development of digital capabilities. In addition to successfully adapting traditional teaching methods to the digital age, the program reinforced the bonds between families and educational institutions in order to provide the best possible learning settings for students' growth.

4. Conclusion

The ecosystem of digital learning has undergone a substantial transition thanks to this community service program. The teachers demonstrated significant progress in their ability to generate digital content and apply e-learning-based interactive learning methodologies after undergoing a series of rigorous training sessions and organised coaching. Teachers' improved capacity to incorporate learning technologies, create captivating digital content, and apply problem-based learning strategies within the framework of digital learning are characteristics of this achievement. This change aligns with the program's objective of using digital technology appropriately to improve learning efficacy and creativity.

Strong learning synergies between the home and school contexts are the outcome of the program's creative element, which involves active parental participation. The program's success in developing a comprehensive learning ecosystem is demonstrated by the development of a sustained digital learning community, which is characterised by efficient parent-teacher collaboration in optimising the e-learning platform. n addition to effectively adapting traditional teaching methods to the needs of the digital age, the program has reinforced the bonds between families and educational institutions in promoting students' best possible growth. This program's durability offers a solid basis for creating digital learning models that are more accessible and adaptable to changing educational requirements.

5. References

Adelsberger, H. H., Collis, B., & Pawlowski, J. M. (2013). Handbook on information technologies for education and training. Springer Science & Business Media.

Alomar, A. Z. (2022). Undergraduate medical students' perceptions of an online audio-visual-based module for teaching musculoskeletal physical examination skills. Journal of Medical Education and Curricular Development, 9, 23821205221078790.

Bashrin, S. D. (2015). Piaget's pre-operational stage in children: a comparative study. BRAC University.

Brown, T. H., & Mbati, L. S. (2015). Mobile learning: Moving past the myths and embracing the opportunities. International Review of Research in Open and Distributed Learning, 16(2), 115–135.

Collins, A., & Halverson, R. (2018). Rethinking education in the age of technology: The digital revolution and schooling in America. Teachers College Press.

Encarnacion, R. F. E., Galang, A. A. D., & Hallar, B. J. A. (2021). The impact and effectiveness of e-learning on teaching and learning. Online Submission, 5(1), 383–397.

Goldman, S. E., & Burke, M. M. (2017). The effectiveness of interventions to increase parent involvement in special education: A systematic literature review and meta-analysis. Exceptionality, 25(2), 97–115.

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, 275–285.

Hennessy, S., D'Angelo, S., McIntyre, N., Koomar, S., Kreimeia, A., Cao, L., Brugha, M., & Zubairi, A. (2022). Technology use for teacher professional development in low-and middle-income countries: A systematic review. Computers and Education Open, 3, 100080.

Koller, V., Harvey, S., & Magnotta, M. (2006). Technology-based learning strategies. Social Policy Research Associates Inc, 1–13.

Kreijns, K., Van Acker, F., Vermeulen, M., & Van Buuren, H. (2013). What stimulates teachers to integrate ICT in their pedagogical practices? The use of digital learning materials in education. Computers in Human Behavior, 29(1), 217–225.

Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: effects on instructional quality and student development. Journal of Educational Psychology, 105(3), 805.

Lock, J. V. (2015). Designing learning to engage students in the global classroom. Technology, Pedagogy and Education, 24(2), 137–153.

Priyono, A., & Hidayat, A. (2024). Fostering innovation through learning from digital business ecosystem: A dynamic capability perspective. Journal of Open Innovation: Technology, Market, and Complexity, 10(1), 100196.

See, B. H., Gorard, S., El-Soufi, N., Lu, B., Siddiqui, N., & Dong, L. (2020). A systematic review of the impact of technology-mediated parental engagement on student outcomes. Educational Research and Evaluation, 26(3–4), 150–181.

So, H.-J., & Kim, B. (2009). Learning about problem based learning: Student teachers integrating technology, pedagogy and content knowledge. Australasian Journal of Educational Technology, 25(1).

Whitfield, A. (2024). Virtual Learning for Exceptional Learners and Its Impact On Parent Involvement, Online Readiness, and Academics. Trevecca Nazarene University.

Widiastuti, D. E. (2024). The implementation of Canva as a digital learning tool in English learning at vocational school. English Learning Innovation, 5(2), 264–276.

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