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THE PROSPECTIVE ELEMENTARY SCHOOL TEACHER STUDENTS' OPINION IN ONLINE LEARNING USING VIRTUAL LEARNING ENVIRONMENTS

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Abstract: Digital-based education, including virtual learning environments, has gained traction within the community. However, it is essential to acknowledge that not all online learning experiences are without drawbacks; they come with advantages and disadvantages. Therefore, the primary objective of this study is to investigate the perspectives of student candidates aspiring to become elementary school teachers regarding their experiences with online learning via virtual environments. The research methodology employed here is descriptive and qualitative. The study encompasses a participant pool of 60 students in their fifth semester. The findings of this research reveal that, on the whole, students exhibit satisfaction and comfort in using virtual learning environments. The incorporation of virtual learning environments contributes to a resource-efficient learning approach. Additionally, implementing these virtual environments nurtures self-confidence and independence among learners. Notably, the most significant advantage of online learning via virtual platforms from home is the ability to store learning materials, enabling students to revisit them as needed. This condition is made feasible by downloading online learning materials, allowing children to save and access them conveniently. However, challenges persist, including weak internet signals, limitations in delivering all materials online, and the students' demand for practical material examples.

Keywords: Online Learning, Virtual Learning Environments (VLE), Learning Technologies

INTRODUCTION

Recent advancements in technology offer numerous advantages and prospects within education and training. Integrating technology into education introduces a novel learning environment and an innovative approach to acquiring knowledge (Nishida, Yamakawa, Shiina & Kudo, 2019; Rachmadtullah, Zulela & Sumantri, 2019). One manifestation of technology-driven education involves implementing online learning via virtual learning platforms (Sherry, 2019). Online learning constitutes an accessible and widely dispersed educational system that utilizes pedagogical tools and educational resources, made feasible through the Internet and network-based technologies, to facilitate the cultivation of knowledge and learning processes through meaningful engagement and interaction (Van Wart et al., 2020) (Yusny & Yasa, 2019) (Sunal & Wright, 2012).

Experience during the COVID-19 pandemic, learning activities around the world used online learning, so the rapid development of information technology caused a change in the learning paradigm(Rani Lidiawati, 2021) (Sucipto, 2022)(Shamir-Inbal & Blau, 2021). The use of virtual learning environments is one of the elements that has contributed to these changes, as it can include freedom of interaction between students and instructors or between fellow students regarding time and study space limitations. A virtual world as a form of 3D simulation can be an alternative to learning activities (Carter, Rice, Yang & Jackson, 2020; Hamilton, McKechnie, Edgerton & Wilson, 2021).

Online learning using virtual learning environments is a form of information technology development that is applied in education so that future developments in educational technology can be supported empirically (Gallagher & LaBrie, 2012)(Whalley & Barbour, 2020). In its development, most educational institutions in Indonesia use online learning systems using virtual learning environments (Kurniawati & Muhajjalin, 2020) (Shikhman & Müller, 2021) (Gallego & Topaloglu, 2019). The involvement of information and communication technology is very much needed in helping the learning process, but every technological innovation besides getting convenience and advantages will likely experience weaknesses (Sonnenschein, Stites & Ross, 2021) (Sims, 2021b).

The implementation of online learning presents both advantages and disadvantages. Online learning offers several benefits, including enhanced effectiveness and efficiency in learning, increased flexibility for students to independently study course materials, a broader range of learning opportunities, and the ability for self-paced learning. However, its drawbacks include challenges in implementation when lacking supportive facilities and infrastructure, unequal internet access across various locations, and disparities in students' access to necessary resources(Sims, 2021a) (Mu'awwanah, Marini, & Sumantri, 2021).

Online learning aligns its materials and scheduling with the curriculum, providing flexibility regarding study location and allowing students to learn anywhere and at any time(Auer, 2017) (Joosten et al., 2020). The effectiveness of learning media relies not only on technical aspects but also on individual student characteristics. Different universities may employ varying forms and techniques in their online learning approaches. Regarding outcomes, some students may report difficulties comprehending course materials, increased reliance on independent assignments, and challenges in performing practical coursework to support their studies (Belawati, 2019) (egsaugm, 2020) (Sims, 2021a).

For students, online learning represents an alternative educational approach that eliminates the need for physical classroom attendance. Furthermore, this learning mode fosters self-reliant study habits(Sims, 2021a) (Jin et al., 2023) (Van Wart et al., 2020). It promotes student interaction, especially among those who may be less inclined to participate verbally, as it allows them to express their thoughts and questions in writing, particularly evident in the current context of online learning.

As for instructors, online teaching methods offer a departure from traditional teaching approaches, ultimately enhancing their professional practice. The online learning model also facilitates more effective assessment and monitoring of individual students' progress, enabling direct interaction and the maintenance of comprehensive records(Nakayama & Santiago, 2012) (egsaugm, 2020)(Hazan & Megiddo, 2007).

Even though online learning is now commonplace, research studies in the Elementary School Teacher Education study program at Universitas PGRI Adi Buana Surabaya rarely find out about the Opinions of Prospective Elementary School Teacher Students in online learning using virtual learning environments. Therefore, this research is important because it can reflect that lecturers consistently improve the quality of learning, especially online learning, using virtual learning environments.

METHODS

Research design

The research methodology employed is descriptive and qualitative. Qualitative descriptive research aims to communicate findings about current communication strategies by examining data and observational outcomes and through data presentation, analysis, and data interpretation. The researcher primarily categorizes individuals who observe symptoms and documents them in their observation log. In this research endeavour, both observations and interviews were conducted to

investigate the viewpoints of potential elementary school teacher candidates concerning online learning using virtual learning platforms.

Participant

The participants in this study were students of the elementary school teacher education department at PGRI Adi Buana University Surabaya in the odd semester (5) of the 2021-2022 academic year, totalling 60 students. The participants are students who do online learning using a virtual learning environment platform developed by PGRI Adi Buana University, Surabaya.

Data collection

Data collection in this study employs two primary methods: (1) Observation, a foundational technique in non-test research. Observations are conducted with great attention to detail, ensuring they are clear, comprehensive, and conscious, focusing on the actual behaviours of individuals within specific contexts. The significance of observation lies in its capacity to identify the initial factors influencing behaviour and to provide precise descriptions of individual reactions observed under specific circumstances. (2) Interviews, which involve gathering research information through a question-and-answer format, are typically conducted face-to-face between the interviewer and the respondent, utilizing an interview guide. During this study, all respondent answers were recorded verbatim. Occasionally, the interviewer inserted remarks to seek clarification or address responses that diverged from the original question. The interview format utilized in this research is a structured interview.

Data analysis

Data analysis in this study occurred concurrently with data collection and after the conclusion of data collection within a defined timeframe. During the interviews, the researcher conducted initial analyses of the responses. If the analyzed responses were deemed unsatisfactory, the researcher continued the analysis process to a certain point, repeating it until credible data was obtained. Furthermore, qualitative data analysis activities were carried out interactively and continuously until the analysis process was completed.

RESULTS AND DISCUSSIONS

Results

This study obtained the results of the Opinions of Prospective Elementary School Teacher Students in online learning using virtual learning environments with sub-themes (1) Student

perceptions of using virtual learning environments in terms of convenience. (2) Students' perceptions about the constraints of using virtual learning environments. The explanation of the research results is as follows:

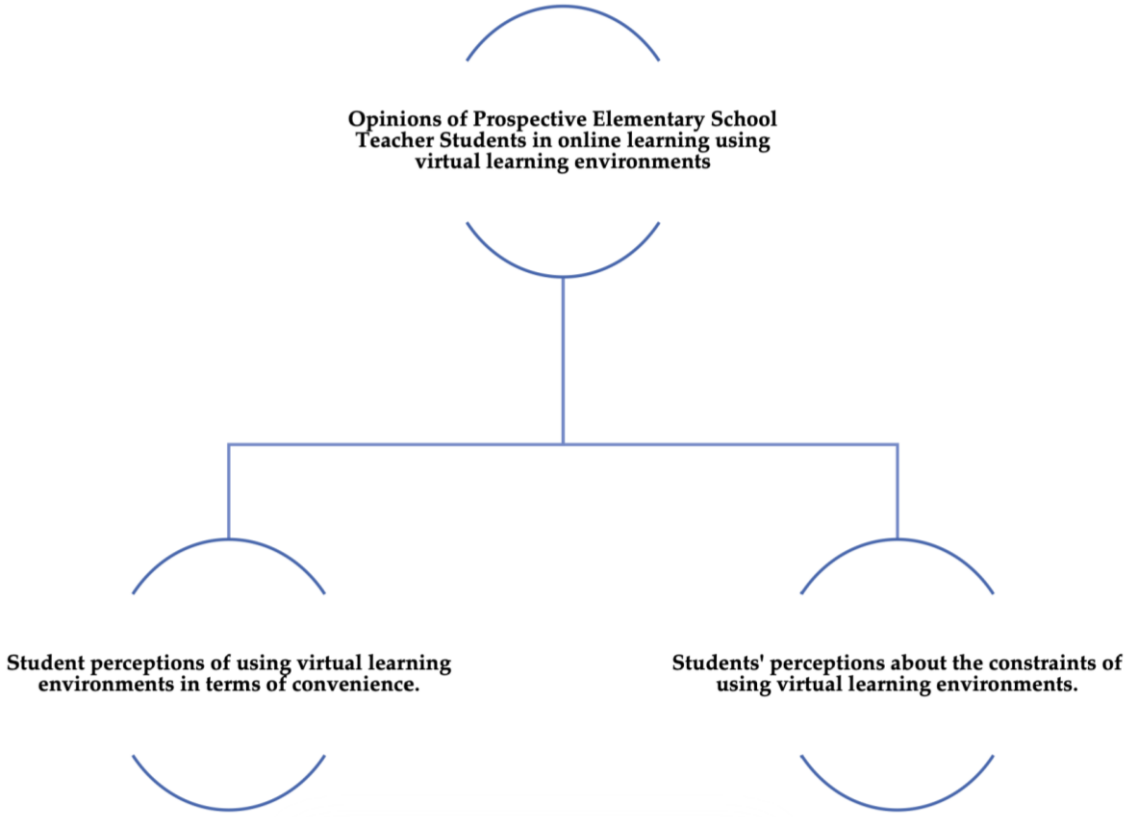

Figure 1. Research themes and sub-themes

Student perceptions of the use of virtual learning environments are viewed from the convenience aspect

Through online learning via virtual learning environments, students gain the flexibility to acquire knowledge at their convenience, free from spatial and temporal constraints. This learning mode offers many activities, including online discussions, assignment submissions, material downloads and uploads, access to educational videos, and communication via messages. Online learning through virtual learning environments possesses characteristics of networked connectivity, enabling swift repairs, secure storage, easy retrieval, efficient distribution, and seamless sharing of learning materials and information.

The advantages of online learning utilizing virtual learning environments are manifold. Firstly, it facilitates enhanced content absorption by leveraging multimedia resources encompassing images, text, animations, sound, and videos. Secondly, it proves highly cost-effective, eliminating the need for an instructor and having no minimum audience requirements. It can be accessed from anywhere and at any time, offering a budget-friendly option for replication. Lastly, it fosters a more concise

learning experience, reducing the formality associated with traditional classrooms and enabling a direct focus on subject matter as needed.

In a general context, the respondents agreed to express their satisfaction with online learning facilitated by virtual learning environments, attributing this sentiment to its practicality and flexibility. Its practicality is the primary advantage of employing virtual learning environments for online education. Online learning fosters a more pragmatic dynamic between educators and learners, obviating the need for physical commutes and formal classroom settings. The pedagogical process can transpire in any conducive location that promotes focused engagement. Furthermore, the absence of stringent dress codes or formal attire requirements contributes to the inherent flexibility of this approach. This contemporary adaptation of online learning through virtual environments aligns more suitably with the preferences of modern learners, contrasting with conventional classroom-based learning methods.

The instructional delivery within online learning modules typically amalgamates formal and informal pedagogical elements, rendering the learning experience enjoyable. Online learning via virtual environments eliminates traditional classroom fixtures, such as teachers employing markers and whiteboards and students relying on paper-based notes and writing utensils. Instead, learners encounter more engaging educational content through diverse multimedia formats, including imagery, videos, and audio components. This multifaceted approach enhances the overall appeal of the learning process. The outcome of a student questionnaire designed to assess the usability and user-friendliness of virtual learning environments is depicted in Figure 2.

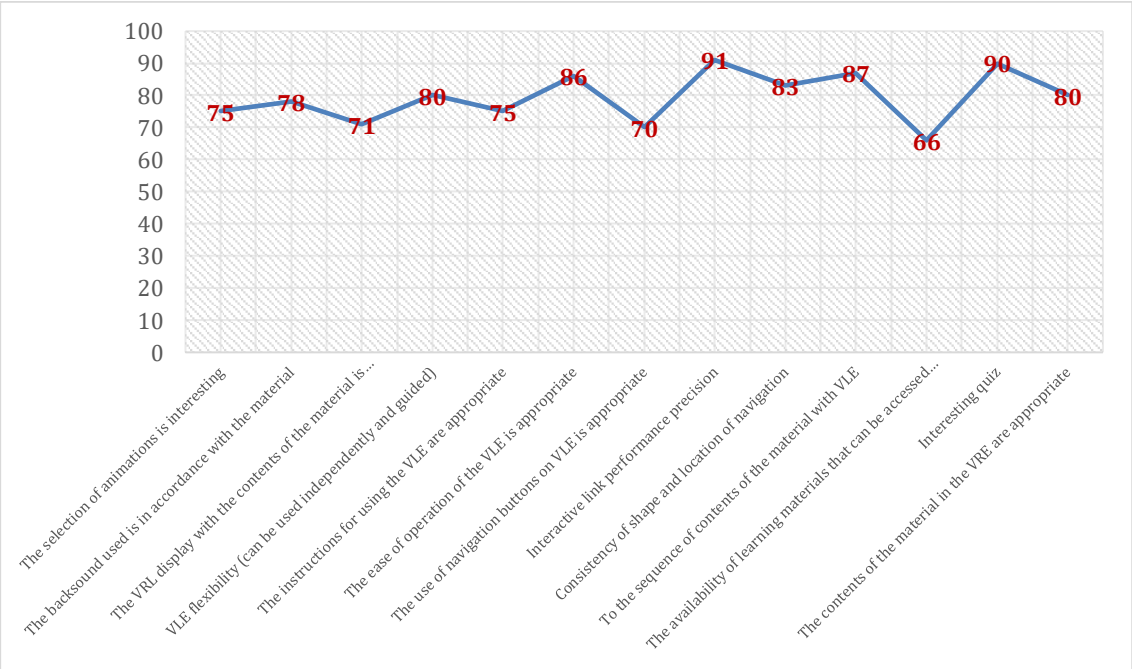

Figure 2. Percent of student respondents about the ease of use of virtual learning environments

As indicated by Figure 2, when the percentage of responses from elementary school teacher candidates exceeds 60%, it suggests that students perceive virtual learning environments as a source of satisfaction, with feelings of contentment and ease. The advantages of utilizing virtual learning environments encompass fostering highly efficient student communication and discussion. This environment facilitates peer interactions and discussions without the necessity of the instructor's intermediation. Additionally, it serves as a conduit for enhancing interactions between students and educators.

Student perceptions of constraints in using virtual learning environments

The results of interviews regarding the obstacles students face when learning online using virtual learning environments found that out of 60 students, 40 did not experience problems. In comparison, five students answered that they experienced problems with student signals. As many as ten students answered that they had problems understanding learning material if learning was not directly in class meeting lecturers and peers. Students find it difficult to ask questions directly and require offline discussions. Meanwhile, the researcher interviewed one of the lecturers to strengthen this statement.

> *Indeed, online learning using virtual learning environments is exciting and makes it easy to learn and teach online. Still, the obstacles often faced are that some students are not active, the internet signal network is sometimes unstable, and some material, especially material that is hard to explain. (Respondent TC).*

Implementing online learning using virtual learning environments is not as easy as expected. Students face various obstacles in the learning process in online virtual learning environments, such as new changes that can indirectly affect students' absorption of theoretical and practical learning, distracted attention during the learning process, and internet connections that are not supported, sometimes disrupted.

Discussion

The findings of this study shed light on the favourable perspectives prospective elementary school teacher students hold towards online learning within virtual learning environments. These sentiments echo the research conducted by Araka, Maina, Gitonga & Oboko (2020), highlighting the multifaceted advantages of online education. These advantages include economic and temporal savings, enhanced practicality and adaptability, an apt pedagogical approach, an enjoyable and engaging learning experience, heightened personalization, simplified documentation, and environmental sustainability through reduced paper usage (Sarnoto et al., 2023).

The deployment of proficient virtual learning environments in online education further ensures uniform and consistent delivery of instructional content, significantly impacting learners across the board. This uniformity facilitates an equitable educational experience where all learners can receive training at a similar level of competence. The accessibility and universality of online learning via proficient virtual environments extend its benefits to individuals regardless of their geographical location (Yunusa & Umar, 2021; Kassymova et al., 2020; Affouneh, Salha, & Khlaif, 2020). This characteristic empowers learners to engage in their studies from the comfort of their preferred settings, allowing them to tailor their learning experiences to their unique understanding and aptitude levels. Consequently, all participants in online learning within proficient virtual learning environments can aspire to attain a comprehensive mastery of the subject matter. Even in remote areas, the learning process remains accessible and feasible, courtesy of virtual learning environments' versatile and accommodating nature (Affouneh, Salha, & Khlaif, 2020; Rodrigues et al., 2019; Huang et al., 2019).

It is essential to acknowledge that while online learning within virtual environments may be seamless for urban communities endowed with robust internet connectivity, the experience is vastly different for rural communities hampered by limited internet infrastructure. As elucidated by Mulders, Buchner & Kerres (2020), specific online learning methodologies employ one-way virtual learning environments, which, unfortunately, result in diminished teacher-student interactions, which, in turn, can hinder the student's ability to seek further clarification on the complex subject matter (Singh & Thurman, 2019; Hsu, Wang & Levesque-Bristol, 2019).

Furthermore, the comprehension of materials delivered through online learning within virtual environments is influenced by the diverse levels of user aptitude, as observed by Francis, Wormington & Hulleman (2019) and Wang, Guo, He & Wu (2019). While some individuals may rapidly grasp content through independent reading, others require more time to attain a comprehensive understanding. Additionally, particular learners rely on external explanations provided by peers or instructors to facilitate their comprehension of the study materials, as highlighted by Aluja-Banet, Sancho, & Vukic (2019) and Odrekhivskyy et al. (2019).

In summary, online learning within virtual environments offers numerous advantages, including adaptability, cost-effectiveness, personalization, and environmental friendliness. However, it poses challenges for rural communities with limited internet access and varies in effectiveness based on individual aptitude and the level of interactivity within the virtual environment. Thus, educators and policymakers must consider these nuances to create an inclusive and practical online learning experience.

There is a pressing need for infrastructure development to address the challenges posed by online learning, especially in rural areas with limited internet access. Governments, educational institutions, and private sectors must collaborate to expand reliable internet connectivity to underserved regions. The collaboration will bridge the digital divide and ensure students have equal access to online education regardless of location.

Moreover, the limitations of one-way virtual learning environments should prompt educators to explore innovative methods of fostering teacher-student interactions in the digital realm. Interactive tools, virtual discussions, and real-time communication platforms can help recreate the engaging and informative classroom atmosphere to ensure that students can seek clarifications and engage in meaningful discussions, enhancing their learning experience.

Regarding the varying levels of user aptitude, educators should adopt a differentiated approach to online instruction. Recognizing that students have diverse learning styles and paces, instructors should offer a range of resources, including multimedia presentations, additional readings, and peer-assisted learning opportunities. This approach accommodates different learning preferences and ensures that students can grasp the material at their own pace and in their preferred way.

Furthermore, educators should provide guidance and support for students who require external explanations or peer interaction to comprehend the study materials fully. Encouraging collaborative learning, organizing peer-assisted study groups, or offering virtual office hours for one-on-one clarification sessions can bridge the gap for those who need additional assistance.

In conclusion, while online learning within virtual environments offers many advantages, it is essential to acknowledge and address the challenges that some students and communities face. By investing in infrastructure, fostering teacher-student interactions, and adopting a differentiated approach to instruction, educators and policymakers can ensure that online education remains inclusive and effective for all learners, regardless of their circumstances or learning preferences.

CONCLUSION

The educational landscape is undergoing profound transformations due to digitalization, necessitating educators to harness their creativity in novel ways. In this era of technology, the impact on students, both positive and negative, is substantial. As prospective elementary school teacher students engage in online learning through virtual environments, they predominantly express contentment and ease in their educational pursuits. However, they also encounter challenges, notably subpar internet connectivity and the occasional struggle to grasp certain learning materials when

delivered virtually. This confluence of technological advancement and pedagogical adaptation underscores the need for educators to navigate the digital realm with ingenuity, mindful of the diverse experiences and challenges their students encounter.

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