The Use of Mobile Learning on Increasing Learning Communication Among Nursing Students

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Abstract

Objective: This research investigates the impact of a mobile-based learning tool—created with Smart App Creator—on improving communication-related learning outcomes among nursing students.

Method: The study employed a quantitative methodology, utilizing a one-shot case study design. From a total of 163 nursing students, 37 participants were randomly chosen through a simple random sampling method. Data were gathered through a combination of assessments, surveys, direct observations, and semi-structured interviews. Analytical procedures included descriptive statistics, t-tests, and regression techniques to interpret the findings.

Results: The findings indicated a meaningful enhancement in students' communication competencies following the use of the mobile learning application. Statistical evidence supported the conclusion that the tool contributed positively to various aspects of learning, including communication skills, learner engagement, motivation, and the ability to retain information.

Conclusion: Integrating mobile applications into nursing education can significantly strengthen students' learning communication. These results underscore the potential of digital platforms in advancing communication training. It is recommended that subsequent studies explore the design of more interactive and content-rich mobile learning resources to further support effective teaching and learning processes in healthcare education.

Keywords: Mobile Learning, Learning Communication, nursing student, Smart App Creator

INTRODUCTION

The rapid advancement of information and communication technology (ICT) has revolutionized education, enabling access to diverse learning resources and fostering innovative teaching methods. Education, fundamentally a process of communication and knowledge exchange, benefits significantly from integrating technology as a medium for delivering educational materials (Darmawan, 2012). These technological advancements align with global educational trends emphasizing flexibility, accessibility, and interactivity in learning. Mobile devices, initially designed for communication, have evolved into indispensable tools for education. Mobile learning (M-learning) leverages mobile technologies to facilitate the delivery of educational content, enabling students to learn anytime and anywhere. As defined by Quinn (2011), M-learning represents the intersection of mobile computing and e-learning, characterized by accessible resources, rich interactions, and performance-based assessments. This approach not only supports

independent study but also promotes collaborative learning environments, which are crucial for professional programs like nursing.

The adoption of mobile learning has shown several benefits, including improved student engagement, motivation, and retention of knowledge. Studies have demonstrated that learners using mobile applications report enhanced understanding and the ability to apply knowledge in practical contexts (Vucetic & Odadzic, 2010). Furthermore, mobile learning aligns with adult learning theories, emphasizing learner autonomy and experiential learning. For nursing students, who often require flexible schedules due to clinical rotations, mobile learning provides a practical solution to access course materials and collaborate with peers (Ismail et al., 2010). Smart App Creator, a versatile software platform, enables educators to create multimedia learning applications compatible with Android, iOS, desktop, and web browsers. This technology supports the creation of interactive and engaging content, allowing students to explore concepts through videos, quizzes, and simulations. Such innovations are particularly relevant for nursing education, where communication skills and real-world applications are critical.

Despite the growing interest in mobile learning, challenges such as technological infrastructure, digital literacy, and content customization remain. This study aims to evaluate the effectiveness of mobile learning applications in improving learning communication among nursing students. By addressing the question: "Can mobile learning applications enhance learning communication in nursing education?" this research contributes to the broader understanding of technology's role in transforming educational practices

METHODS
Study Design
This study utilized a quasy experimental to evaluate the effectiveness of mobile learning in improving learning communication among nursing students.

Population and Sample
The population included 163 nursing students distributed across three classes. Using simple random sampling, a sample of 37 students from Class 1A was selected to participate in the study.

Instruments
To evaluate the intervention, data were collected through tests, questionnaires, observations, and interviews. These tools assessed learning outcomes, student perceptions, engagement, and the overall effectiveness of mobile learning. The intervention utilized a mobile application developed with Smart App Creator, offering multimedia course content via Android devices to support communication and enhance the learning experience.

Data Analysis
This study employed a quantitative approach using a one-shot case study design to evaluate the impact of mobile learning on nursing students' communication skills. A mobile learning application was introduced as an intervention, and its effectiveness was assessed through various statistical methods. Descriptive analysis summarized student performance and feedback. A t-test was conducted to determine whether the intervention significantly affected learning communication. Additionally, regression analysis was used to examine the relationship between mobile learning usage and improvements in communication abilities. These methods provided a structured evaluation of mobile learning as a tool to enhance communication in nursing education.
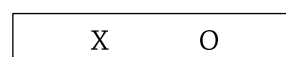
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Figure.1 Experiments process with one shot case study

Population
In this study, the population is all among nursing students 163 students spread over three class. Sampling technigue used was simple

random sampling, then the study sample, which amounted to 37 learners TK. 1 A class as a class experiment. In the data collection is done by tests, guestionnaires, observations, and interviews. To analyze the data that has been obtained, the data analysis techniques used are (1) a descriptive analysis, (2) t-test analysis, and (3) regression analysis.

RESULTS

One of the learning media models can be used by lecturers, namely mobile learning. Mobile learning is a model learning that utilizes technology and mobile devices. Hadhono and Damayanti, et al. describe that mobile learning is a distance learning model that uses communication and information technology. The advantages that can be emphasized by the mobile learning model are that students can learn anywhere and anytime without being bound by place and time. Clark Quinn put forward mobile learning as "The intersection of mobile computing and e-learning: accessible resources wherever you are, strong search capabilities, rich interaction, powerful support for effective learning, and performance-based assessment. E-Learning independent of location in time or space".

Application that can create mobile-based learning applications is Smart App Creator. Smart App Creator is an application that teachers can use to create mobile, desktop, and web-based multimedia applications. The final result of its development can be converted into several application bases, namely Android, iOS, desktop, and HTML5 Web which can be accessed via a browser. That way, learning is not bound by place and time, meaning that learning can be done anywhere and anytime.From that understanding, it can be concluded that the application of mobile learning contributed to the increase learning communication among nursing student.

DISCUSSION

The result of the research that has been done, the application of mobile learning can improve student learning communication. civics

competence by testing there hypotheseses derived F-count > F table, or 11,759 > 3259, the ho is accepted. So it can be concluded that the application of mobile learning can increase the learning communication among nursing student.

This is in accordance to that done by (8) Vucetic and Odadzic (2010: 33) states that:

This research has shown that the following positive effects are achieved:

1. Atrracring student attention,
2. Obtaining higher interest levels, motivation and satisfaction of the students,
3. Greater understanding of the context and easier access to mew information,
4. Better memorizing of the context and the possibility to apply this knowledge in new situations.

Based on that. it can be explained that with the implementation of Mobile Learning provide a positive effect on students, such as dancing to the attention of students, foster interest, motivation, and satisfaction in learning, has a great understanding iead so high learning outcome, and case in accessing information regarding the subject matter, as well as facilitate learners in memorizing Civics lesson material on the national legal and judicial systems.
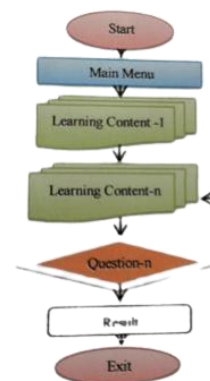

Figure.2 flowchart for learning communication

CONCLUSIONS

From the results of the study and discussion of this From he research results it can be

concluded that application of Mobile Learning can improve in learning communication students among nursing student. This means the application of Mobile Learning contributed to the incrensing learning communication among nursing students.

Based on the conclusions obtained, it may submit suggestions: (1) lecture im creating lesson plans using methods, models, and learning strategies are varied, with the use of media, (2) in implementing effective learning process, it Is good again deepening teachers' technology learning, especialty the use of media, such as the use of mobile phones as a learning, (3) for further research, is expected to develop in making teaching materials more interactive Mobile learning

Acknowledgement

Conflict of Interest

The authors declare no conflict of interest.

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