



## Development of mobile-based learning in Kapita Selektta Pendidikan courses

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### ABSTRACT

This research is development research that focuses on creating mobile learning-based learning media in education courses. This research aims to produce mobile learning-based learning media using the Smart Apps Creator (SAC) application that suits student needs and is valid and practical so students can learn anytime and anywhere. The research method used is Research and Development with the ADDIE development model, which consists of 5 stages: analysis, design, development, implementation, and evaluation. This research was conducted at the Educational Technology Study Program, Faculty of Education in Universitas Negeri Makassar. This research found that mobile learning-based learning media in capita selecta education courses were developed and were in the valid category; analysis of the level of practicality of lecturer and student responses was in the excellent category, so a value was obtained in the practical category. Research into developing mobile learning-based learning media in capita selecta education courses is expected to make it easier for students to learn independently.

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### ABSTRAK

Penelitian ini merupakan penelitian pengembangan yang berfokus pada pembuatan media pembelajaran berbasis mobile learning pada mata kuliah kapita selektta pendidikan. Penelitian ini bertujuan untuk menghasilkan media pembelajaran berbasis mobile learning dengan menggunakan aplikasi Smart Apps Creator (SAC) yang sesuai dengan kebutuhan mahasiswa yang valid dan praktis sehingga mahasiswa dapat belajar kapan saja dan di mana saja. Metode penelitian yang digunakan yaitu Research and Development dengan model pengembangan ADDIE yang terdiri dari 5 tahapan, yakni: analisis, desain, pengembangan, implementasi dan evaluasi. Penelitian ini dilaksanakan di Program Studi Teknologi Pendidikan Fakultas Ilmu Pendidikan Universitas Negeri Makassar. Berdasarkan penelitian tersebut diperoleh media pembelajaran berbasis mobile learning pada mata kuliah kapita selektta pendidikan yang dikembangkan dan berada pada kategori valid; analisis tingkat kepraktisan respons dosen dan mahasiswa berada pada kategori sangat baik, sehingga diperoleh nilai dengan kategori praktis. Penelitian pengembangan media pembelajaran berbasis mobile learning pada mata kuliah kapita selektta pendidikan diharapkan dapat memudahkan mahasiswa dalam belajar secara mandiri.

**Kata Kunci:** Media pembelajaran; mobile learning; SAC: Smart Apss Creator

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## INTRODUCTION

As a professional lecturer, one must be able to transfer knowledge to students effectively. Currently, the utilization of Information and Communication Technology (ICT) has become one of the alternatives for learning due to its attractive features in terms of color, sound, images, and videos. Parties related to education, such as teachers, students, and educational institutions, must be able to follow and walk together with technological advances (Effendi & Wahidy, 2019; Syahputra, 2018). This enables students to engage multiple senses in the learning process. Based on the initial observations by the researchers involving 28 students from the Educational Technology Program at the Faculty of Education, Universitas Negeri Makassar, in the Selected Topics in Education course conducted through interviews and questionnaires, the needs analysis of the 28 students revealed that they require additional features in learning media such as instructional videos and quizzes that can be accessed anytime and anywhere, commonly known as mobile learning, which supports independent student learning. The initial observations, through interviews with the instructor of the Selected Topics in Education course, indicated that the media used in the teaching process typically include printed books, e-modules, and e-books. Mobile learning has emerged as a promising educational paradigm, revolutionizing the landscape of higher education (Asadullah et al., 2023). Although the learning media used are already based on mobile learning, according to the student's needs, additional features such as instructional videos and quizzes are necessary for students to learn independently, with these supplementary features accessible anytime, anywhere, without being bound by physical space and time.

Mobile learning is a form of learning that can be accessed through gadgets is practical and portable. In this case, mobile learning-based learning can be accessed through smartphones, tablets, PCs, and laptops. The Selected Topics in Education course significantly requires regularly updated media since this course is crucial for students, especially those coming from diverse educational backgrounds. This course deals with critical educational issues selected to identify their causes and determine solutions. Education is dynamic; therefore, this course necessitates continuously updated learning media. Hence, the end product developed by the researchers is mobile learning-based instructional media that can be used on Android, iOS devices, and PCs without requiring programming code. It can generate HTML5 and executable (exe) formats. In implementing Smart Apps Creator (SAC), additional features such as images, animations, videos, and sounds can be incorporated based on the needs. Moreover, the instructor of the Selected Topics in Education course strongly supports and assumes that this media is more appealing to students, making learning more diverse, flexible in usage, and capable of fostering a high level of curiosity.

Related research on mobile learning applications can be seen in the study by Robianto and Marsono (2019), which concluded that mobile learning-based instructional media is suitable for supporting independent learning. Another study by Fakhira et al. (2020) researched the Constructivist approach to mobile learning in increasing student creativity. Fakhira et al. found that mobile learning can improve the ability of students to creativity, critical thinking, and problem-solving.

This study focused on creating and developing a learning environment that allows students to learn independently anytime and anywhere without being bound by space and time. The development carried out in this research includes instructional videos at the end of each topic and quizzes as material assessments that can instantly display quiz scores.

## LITERATURE REVIEW

### Learning Media

The improvement in students' learning quality and success can be seen from the ability of lecturers to choose and determine the media used. [Utomo et al. \(2021\)](#) stated that learning media is anything or tools that can be used to delivery learning materials in the learning process, so teachers can influence students' to create a classroom atmosphere. The availability of media has an influence on the learning process; for example, if the material presented by the lecturer is unclear, it can be assisted by media that serves as an intermediary. Learning media is a tool used to convey information and messages from one person to another, specifically from lecturers to students, so that the learning process runs smoothly and learning outcomes can be achieved. Learning media will make the learning process more effective, efficient and optimize communication in the classroom ([Puspitarini & Hanif, 2019](#); [Widodo, 2018](#); [Ramadhan et al., 2020](#)). Therefore, learning media is a support tool for achieving learning objectives and goals.

Learning media is divided into two types, namely software, such as applications, and hardware, such as teaching aids, books, and so on ([Prasetio & Musril, 2021](#)). According to [Nofriyandi et al. \(2021\)](#), learning media is a dominant element for the success of the learning system; indeed, learning media greatly facilitates lecturers in delivering the material. According to [Septiawan and Abdurrahman \(2020\)](#), learning media must convey messages perfectly and address the needs and problems of students in learning. Therefore, using learning media in the learning process can be more accessible and make an uninteresting learning process interesting and clarify the delivery of material by using concrete examples. According to Pratiwi in "*Pengembangan Media Pembelajaran Biologi Berbasis Web pada Materi Evolus*", learning media is a message-carrying technology that can be used for learning purposes. Therefore, the researchers can conclude that learning media delivers learning material that is expected to create conditions that engage students to acquire knowledge.

### Mobile Learning

Rapid technological developments are changing the learning environment to be technology-based ([Silber-Varod et al., 2019](#)). Not only making learning media in traditional forms such as books, globes, etc. But it also takes "digital" forms such as electronic, mobile, and digital learning ([Kumar et al., 2018](#); [Fahrozy et al., 2022](#)). [Ismiyanti \(2021\)](#) stated that students need alternative learning media, so designing a system that makes learning activities easier is necessary and also mentioned that the system's design should be helpful and easy to use.

Mobile learning is a form of learning that can be accessed through gadgets, being practical and portable. In this case, mobile learning-based learning can be accessed through smartphones, tablets, PCs, and laptops. The end product developed by the researcher is mobile learning-based instructional media that can be used on Android, iOS devices, and PCs without requiring programming code. It can generate HTML5 and executable (exe) formats. Additionally, using Smart Apps Creator (SAC), images, animations, videos, and sounds can be added as needed. The instructor of the Selected Topics in Education course strongly supports and assumes that this media is more appealing to students, making learning more diverse, flexible in usage, and capable of fostering a high level of curiosity. According to [Mahuda et al. \(2021\)](#), mobile learning can support the learning process and enhance flexibility in learning activities, resulting in better learning outcomes. [Pappas et al. \(2019\)](#) also stated that the use of m-learning and students' perceptions of m-learning significantly influence the success of learning.

The development of mobile learning-based instructional media aims to assist students in independent learning without direct supervision from the lecturer, making it easier for students to understand the learning material. This aligns with the research conducted by Bettayeb et al. (2020), which concluded that using mobile learning instructional media can enhance learning motivation and increase learning effectiveness, such as usefulness, usability, and self-efficacy. Mobile learning is the ability to receive or present information in any format on personal mobile devices. The use of mobile learning can support the teaching and learning process and enhance flexibility in teaching and learning activities, resulting in better learning outcomes (Mahuda et al., 2021; Yaniawati et al., 2023). Bernacki et al. (2020) found in their research that mobile learning shows that (1) influences learning processes and products through interaction with other psychological constructs; (2) provide new ways to directly influence the learning process or outcomes; and (3) provide opportunities to collect data that previously could not be obtained, thereby improving thinking skills, understanding of learning material, and modeling the learning process.

Android-based learning media can also cultivate students' self-regulated skills during the online learning period. Self-regulated learning is an independent learning activity of an individual (Ratnafuri & Muslihati, 2019). According to Putra in "Karakteristik Generasi Z di Yogyakarta Tahun 2019", Gen Z simply inputs the desired keywords in the search column of their devices, and quickly, the information they want to know will appear. This is because, through this activity, they can be selective about what they want to use as their identity. According to Kuswanto (2019), android is an operating system illustrated as a bridge between the device and the user, allowing the execution of various applications available on the device. Currently, the Android operating system is widely recognized and extensively used by the public. In fact, android users in Indonesia alone reached more than 100 million people (See: [https://www.kominfo.go.id/content/detail/6095/indonesia-raksasa-teknologi-digital-asia/0/sorotan\\_media](https://www.kominfo.go.id/content/detail/6095/indonesia-raksasa-teknologi-digital-asia/0/sorotan_media), accessed in 2020). Therefore, Android-based learning media is an instructional tool that utilizes information and communication technology and can be accessed on smartphones utilizing the Android operating system.

### **Smart Apps Creator (SAC)**

Creating mobile learning-based instructional media using Smart Apps Creator (SAC) is relatively straightforward because it does not require special programming skills, and the application provides templates for creating media, making it easier for lecturers to input content such as text, images, and videos. Azizah (2020) states that Smart Apps Creator (SAC) is a desktop application used to create iOS and Android applications without programming code. This application can save files in HTML5, .exe, and .apk formats. Smart Apps Creator (SAC) can be used as an alternative method for offline learning because it does not require internet data during the learning process. According to Mahuda et al. (2021), Smart Apps Creator (SAC) is a cutting-edge digital interactive medium that installs multimedia content on Android-based smartphones.

Abidin and Arifin (2021) describe Smart Apps Creator (SAC) as user-friendly, engaging, and enjoyable software. Users can add images, animations, videos, and sounds to make applications more appealing. According to Helly et al. (2022), creating mobile learning-based applications with Smart Apps Creator (SAC) is easy because it does not require programming code and can generate HTML5 and .exe formats. Smart Apps Creator (SAC) can be used to develop various applications, including mobile learning, mobile quizzes, mobile tourism or tour guides, mobile company profiles, mobile product profiles, mobile city branding, mobile marketing, and many others. Based on several opinions about Smart Apps Creator (SAC), it can be concluded that SAC is an application that enables the creation of mobile learning-based instructional media that can be accessed anytime and anywhere on Android and iOS devices, usable on gadgets and PCs, without the need for programming code. It can generate HTML5 and .exe formats and allows adding images, animations, videos, and quizzes in mobile learning-based instructional media. The

study by Yuberti et al. (2021) found that learning media based on smart app creators are highly engaging and capable of motivating students in the learning process (Yuberti et al., 2021). This is in line with the theory presented by Setyadi in (Helmi & Aditya, 2020) that is in line with the theory presented by Setyadi in Helmi & Aditya (2020) that engaging learning media can have a positive impact on students, including enhancing motivation and facilitating their understanding of the given material. This aligns with research conducted by Hamid et al. in “*Media Pembelajaran*” that one of the roles of learning media is to enhance student learning motivation (Hamid et al., 2020). Student learning motivation plays a crucial role in achieving learning objectives.

## Kapita Selektta Pendidikan

Essentially, education is a continuous process. Education is dynamic, meaning it can change and evolve. The same goes for the goals of education, which also change line with the progress of education over time. This change in education is termed as the dynamics of education (Saputra & Marcelawati, 2020).

Kapita Selektta Pendidikan is one of the courses offered in the Educational Technology Program at the Faculty of Education, Universitas Negeri Makassar. According to Nurhikmah in “*Kapita Selektta Pendidikan*”, this course serves as an introduction that encourages students to explore various educational issues and other educational concerns. Therefore, from the statements above, it can be concluded that Kapita Selektta Pendidikan is a course that addresses a collection of essential and selected educational issues, aiming to analyze their causes, determine solutions, and strive to connect the topics with educational issues, especially within the Faculty of Education environment.

## METHODS

### Data Analysis Techniques:

This research utilizes two data analysis techniques, namely qualitative descriptive analysis and descriptive statistical analysis. Qualitative data is used to assess the product’s feasibility. Qualitative data consists of suggestions, feedback, and comments on the assessment sheets of mobile learning-based instructional media by validators. The data is then analyzed qualitatively through data collection, reduction, and conclusion stages. After the analysis, the data is used for revising the generated instructional media. Descriptive statistical analysis is used to process data obtained through questionnaires in the form of percentage descriptions. The **formula** used to calculate the percentage for each subject is:

$$Percentage = \frac{\sum (\text{Answer} \times \text{choice weight}^2)}{\text{total number of questionnaire items} \times \text{maximum weight}} \times 100\%$$

The data obtained is then categorized into the following categories: highly effective, effective, less effective, and highly less effective. The obtained data is then categorized into the following categories: highly less effective, less effective, effective enough, effective, and highly effective, as described in **Table 1** below.

**Table 1.** Indicator of Learning Media Success

| No | Score     | Category              |
|----|-----------|-----------------------|
| 1  | <20%      | Highly Less Effective |
| 2  | 21% - 40% | Less Effective        |
| 3  | 41% - 60% | Effective Enough      |
| 4  | 61%-80%   | Effective             |
| 5  | 81%-100%  | Highly Effective      |

Source: Agung based on book "Metodologi Penelitian Kuantitatif (Perspektif Manajemen Pendidikan)"

The assignment of meaning and decision-making uses the following determinations. The conversion can be seen in **Table 2** below.

**Table 2.** Conversion of Achievement Levels on a 5-point Scale

| Achievement Level | Qualification | Information       |
|-------------------|---------------|-------------------|
| 90%-100%          | Very Good     | No Need to Revise |
| 75%-89%           | Good          | No Need to Revise |
| 65%-74%           | Enough        | Revised           |
| 55%-64%           | Not Enough    | Revised           |
| 0%-54%            | Very Less     | Revised           |

Source: Agung based on book "Metodologi Penelitian Kuantitatif (Perspektif Manajemen Pendidikan)"

Based on **Table 2**, if the validity test results are in the achievement level of 75% - 100% or qualify as good to excellent, it is considered valid. Meanwhile, it is considered practical if the practicality test falls within the achievement level of 75%-100% or qualifies as good to excellent. The method used should be accompanied by references. Relevant modifications should be explained. Procedures and data analysis should be emphasized in the literature reviewing the article. The stages and analysis of the research should be explained in detail. If applicable, samples and sampling techniques should be explained in detail.

## RESULT AND DISCUSSION

The development of mobile learning-based instructional media is driven by the need for engaging, informative, and interactive learning materials using the Smart Apps Creator (SAC) application, which facilitates students in learning the Selected Topics in Education course. The final product of this mobile learning-based instructional media is an application that can be downloaded by users on Android, iOS, and PC devices. The content in the mobile learning-based instructional media consists of learning objectives, which outline the goals to be achieved from the learning process; the material section, which provides elaboration on the learning material accessible repeatedly as needed by students, with instructional videos at the end; a conclusion summarizing critical statements from the entire discussion; and a quiz section comprising multiple-choice questions designed to assess students' understanding after studying the material. If a student answers a question correctly on the quiz page, a notification with a correct/tick icon will appear. Conversely, a cross/wrong icon notification will appear if the answer is incorrect. **Figure 1** shows the material page display.



Figure 1. Material Page Display  
Source: Author's Documentation 2023

In Figure 2, this media showed learning objective.

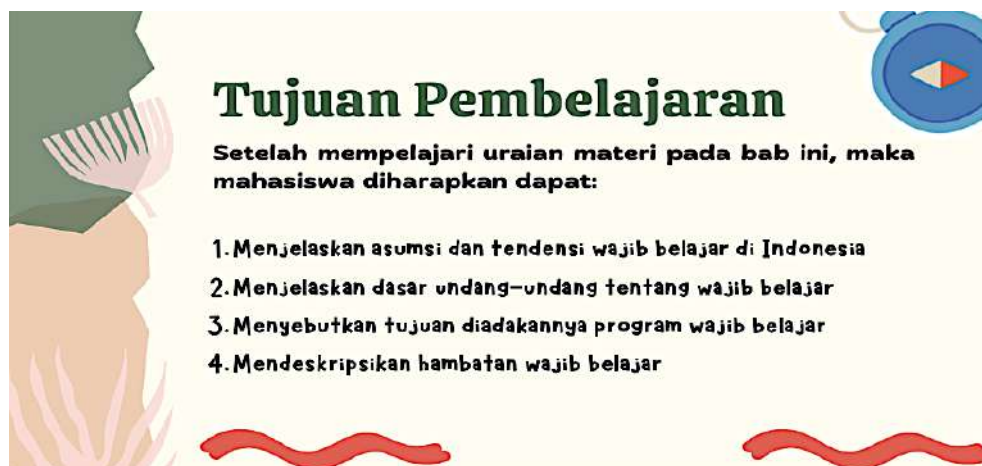


Figure 2. Learning Objective Page Display  
Source: Author's Documentation 2023

Figure 3 and Figure 4 displayed page for learning material.



Figure 3. Material Page Display  
Source: Author's Documentation 2023



**Figure 4.** Conclusion Page Display  
Source: Author's Documentation 2023

Figure 5 and Figure 6 show quiz question and quiz final result page.



**Figure 5.** Quiz Question Page Display  
Source: Author's Documentation 2023



**Figure 6.** Final Quiz Result Page Display  
Source: Author's Documentation 2023

## Validity

The development stages of mobile learning-based instructional media are inseparable from the validation phase. Media experts and subject matter experts carry out validation. In this case, the development of mobile learning-based instructional media involved adding features such as instructional videos at the end of each section, quizzes, and learning materials to be used in the learning process. This media development aims to create mobile learning-based instructional materials that can be accessed anytime, anywhere, without time constraints, supporting students in self-directed learning. The validation results of the instructional media product are as follows.

**Table 3.** Validation Results of the Product by Media and Design Experts

| No            | Aspects Assessed                                                  | Score     |
|---------------|-------------------------------------------------------------------|-----------|
| 1             | Accuracy of color selection and composition                       | 4         |
| 2             | Layout of components in the instructional media                   | 5         |
| 3             | The attractiveness of the screen design                           | 5         |
| 4             | Visibility of menu buttons and clear text with contrasting colors | 5         |
| 5             | Clarity of navigation                                             | 5         |
| 6             | Well-arranged and tidy menu buttons                               | 5         |
| 7             | Ease of use of the instructional media                            | 4         |
| 8             | Interactive presentation of the instructional media               | 5         |
| 9             | Quality of images displayed in the instructional media            | 5         |
| 10            | Quality of videos displayed                                       | 3         |
| 11            | Clarity and comprehensibility of language used                    | 5         |
| 12            | Sentences used represent the intended material                    | 5         |
| 13            | Font type and size used are readable and clear                    | 4         |
| 14            | Accuracy of font color and background                             | 4         |
| 15            | Functionality of buttons in the instructional media               | 5         |
| <b>Amount</b> |                                                                   | <b>69</b> |

Source: Research 2023

Based on the assessment results by media experts, as shown in **Table 3**, the percentage score of the achievement level according to Agung in "*Metodologi Penelitian Kuantitatif (Perspektif Manajemen Pendidikan)*" can be calculated as follows:

$$\text{Percentage} = \frac{69}{15 \times 5} \times 100\% = 92\%$$

After conversion using the conversion table, the validity criteria for mobile learning-based instructional media are 92,00%, categorized as excellent. The feedback suggests that the instructional media can be used without revisions. The design of m-learning, especially the interface of mobile learning, must be designed so that students are comfortable learning. User interface design is an essential factor in the usability of an application, where the organization of visual elements and m-learning media on a cellphone screen dramatically influences the ease of use and quality of learning, which also has a positive impact on students' cognitive load (Al-Hunaiyyan et al., 2018). In line with this, Brata & Brata (2020) explained that the user interface must follow the user's condition or mentality, so the mobile learning design must follow the learning concept. The design developed is "excellent" so it can be said to follow the learning concept so it does not confuse students when using it.

**Table 4** shows the product validation by subject matter experts.

**Table 4.** The Product Validation Results by Subject Matter Experts

| No | Aspects Assessed                                                                  | Score |
|----|-----------------------------------------------------------------------------------|-------|
| 1  | Alignment of the presented material with the Semester Lesson Plan (RPS)           | 5     |
| 2  | Clarity of learning objectives                                                    | 5     |
| 3  | Alignment between the instructional material and learning objectives/achievements | 5     |

| No            | Aspects Assessed                                                   | Score     |
|---------------|--------------------------------------------------------------------|-----------|
| 4             | Alignment of the presented material with the accuracy of knowledge | 4         |
| 5             | Clarity of general instructions                                    | 4         |
| 6             | Clarity of tasks and exercises                                     | 5         |
| 7             | Use of sentences following the rules of proper Indonesian language | 5         |
| 8             | Appropriateness of language use to the student's cognitive level   | 5         |
| 9             | Students easily understand language used in instructional media    | 5         |
| 10            | Encouraging students curiosity                                     | 5         |
| 11            | Encouraging students to build their knowledge                      | 5         |
| 12            | Encouraging students to learn independently                        | 5         |
| <b>Amount</b> |                                                                    | <b>58</b> |

Source: Research 2023

Therefore, the percentage can be calculated as follows:

$$Percentage = \frac{58}{12 \times 5} \times 100\% = 96,66\%$$

The implications of new technology in the learning process can improve the quality of learning and the use of technology in the educational or pedagogical field (Chao, 2019; Szymkowiak et al., 2021). In order to improve this quality, learning materials in mobile learning must be made well so that students can readily accept them. After conversion using the conversion table, the validity criteria for the instructional material developing mobile learning-based instructional media are 96,66%, categorized as excellent. The feedback suggests that the instructional material can be used without revisions. Based on the results of the questionnaire, it is known that students can accept subject matter.

### Practicality Level of Mobile Learning-based Instructional Media

#### Feedback of Selective Education Course Lecturers on Mobile Learning-based Instructional Media

The assessment included in the questionnaire for the response of the lecturers in the Selected Topics in Education course encompasses learning using mobile learning-based instructional media, presentation of the display and components of mobile learning-based instructional media, the utility of components in mobile learning-based instructional media, and alignment with the Semester Lesson Plan (RPS), consisting of 18 questions. Below are the results of the responses from the Selected Topics in Education course lecturers. Based on the assessment through the lecturer's questionnaire in the Selected Topics in Education course, the percentage level of achievement can be calculated as follows:

Practicality Assessment Score:

$$Percentage = \frac{55}{60} \times 100\% = 93,66 \%$$

After conversion using the conversion table, the practicality level of mobile learning-based instructional media is 93,66%, categorized as **excellent/practical**. The scale detail is shown in **Table 5** below.

**Table 5.** Lecturers Responses in the Kapita Selekt Pendidikan

| No | Aspects Assessed                                                                                                     | Scale |
|----|----------------------------------------------------------------------------------------------------------------------|-------|
| 1  | Mobile learning-based instructional media facilitates student learning                                               | 4     |
| 2  | Mobile learning-based instructional media makes the classroom learning process more effective and efficient          | 4     |
| 3  | Mobile learning-based instructional media provides clarity in the material                                           | 3     |
| 4  | Images presented in mobile learning-based instructional media capture students' interest and enthusiasm for learning | 4     |

| No            | Aspects Assessed                                                                                                                         | Scale     |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 5             | The cover of mobile learning-based instructional media has attractive colors and display                                                 | 3         |
| 6             | The layout and display in mobile learning-based instructional media are organized                                                        | 3         |
| 7             | The selection of font type, size, and color is appropriate in mobile learning-based instructional media                                  | 4         |
| 8             | The text in the material, questions, and instructions is readable                                                                        | 3         |
| 9             | There are no obstacles in using mobile learning-based instructional media                                                                | 4         |
| 10            | Instructions for using mobile learning-based instructional media are clear                                                               | 3         |
| 11            | The material in mobile learning-based instructional media is in line with the Semester Lesson Plan (RPS)                                 | 4         |
| 12            | Students easily understand the choice of words and sentences in mobile learning-based instructional media                                | 4         |
| 13            | The choice of instructional videos in mobile learning-based instructional media enhances students' understanding                         | 4         |
| 14            | Each learning activity presented in mobile learning-based instructional media has objectives in line with the Semester Lesson Plan (RPS) | 4         |
| 15            | The questions presented in mobile learning-based instructional media stimulate students' thinking                                        | 4         |
| <b>Amount</b> |                                                                                                                                          | <b>55</b> |

Source: Research 2023

### Student Responses to the Use of Mobile Learning-Based Instructional Media

The practicality of the mobile learning-based instructional media product in the Selected Topics in Education course is also measured through student responses. The mobile learning-based instructional media product was pilot-tested with 28 students who were asked to evaluate the product. This pilot test was conducted to obtain feedback on the performance of mobile learning-based instructional media when operated by students. Based on the assessment results from the questionnaire, the percentage of student responses regarding the mobile learning-based instructional media product in the Selected Topics in Education course is as follows:

$$\text{Percentage} = \frac{2436,60\%}{28} = 87,02 \%$$

Based on the average percentage of the mobile learning-based instructional media product in the Selected Topics in Education course, the trial responses resulted in 87.02%, which falls into the 'good' category and does not require revisions. This indicates that the developed mobile learning-based instructional media meets the practicality criteria and is suitable for learning. According to the student's feedback on the use of mobile learning-based instructional media, they feel motivated, and their interest in learning increases after using this media because it can be accessed anytime and anywhere, and it provides instructional videos and quizzes. As mentioned by [Sattarov and Khaitova \(2020\)](#), mobile learning provides an opportunity for students to learn without walls (not coming to class directly), can be accessed anywhere without being hindered by distance and time, educational materials are easily distributed between users thanks to modern wireless technology such as Bluetooth, downloads, etc.

### CONCLUSION

The analysis of mobile learning-based instructional media needs indicates that this learning material is highly required. Both faculty and students need instructional media that can be accessed anytime, anywhere, without being constrained by physical locations or time. The presence of instructional videos

and quizzes within the mobile learning-based instructional media is essential to stimulate self-directed learning among students.

The evaluation results from media and subject matter experts for the mobile learning-based instructional media show that the resulting instructional media is valid. The assessment was based on various aspects, including instructions, language, and content alignment within the mobile learning-based instructional media. These aspects encompass the alignment of presented material with the lesson plan (RPS), clarity of learning objectives, alignment of instructional material with learning objectives/achievements, alignment with the accuracy of knowledge, clarity of general instructions, clarity of tasks and exercises, appropriate use of language following Indonesian language rules, language appropriateness to students' cognitive levels, ease of understanding the language used in the instructional media, encouraging students' curiosity, encouraging students to build their knowledge, and encouraging students to learn independently.

The evaluation of responses from both faculty and students indicates that the resulting mobile learning-based instructional media is practical. The evaluation considered aspects such as instructions, language, and content, which include the presentation of the display and components in the mobile learning-based instructional media, the utility of components in the instructional media, practicality, and alignment with the lesson plan (RPS).

### **AUTHOR'S NOTE**

The author hopes that this article will be beneficial to readers, and the author emphasizes that this writing does not contain any elements of plagiarism and that there are no issues regarding the publication of the article.

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