

## **"My Volleyball" Android-based Volleyball Learning Media for High School Students**

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**Abstract:** *The purpose of this research is to develop Android-based Volleyball Basic Techniques Learning Media for high school students. The research method uses the development method. Validation was carried out by material experts and media experts. The subjects of this study were students of SMKN 1 Kalinyamatan Jepara, with a population of 198 students consisting of 32 students as a small-scale trial and 166 students as a large-scale trial. Data collection used an instrument in the form of a questionnaire. Data analysis using descriptive quantitative generated in the form of percentages. The results showed that the material expert validation results get an average score of 79.125% and fall into the good category. The results of media expert validation get an average score of 84.75 and fall into the excellent category. In the small-scale product trial, the average assessment results were 87.75% and included in the very good category. While in the large-scale trial getting an average assessment of 85.92% and included in the very good category. The conclusion in this study is that the development of learning media "My Volleyball" is feasible to use as a learning media for basic volleyball techniques for high school students.*

**Key Words:** My Volleyball, Android, Senior High School,

### **Introduction**

Physical education is an important component of education that focuses on teaching skills, acquiring knowledge, and developing attitudes through human movement, contributing to physical fitness and the development of psychomotor skills (Cale, 2023; Kh, 2023; Shubha Kh, 2022). It plays an important role in promoting physically active lifestyles, health-related learning, and overall well-being, especially in schools where it should be central to efforts aimed at increasing physical activity levels (Cale, 2023). Through physical education, teachers can improve each , 2023). Through physical education, teachers can improve each student's ability not only in physical and movement aspects, but also involve cognitive, emotional, and social aspects together (Simatupang, 2005). In addition, physical education serves as a means to promote a healthy lifestyle, active recreation, and the development of positive moral and volitional qualities among young people (Kovaleva & Motuzenko, 2023). Based on some of the theories above, it can be concluded that physical education plays an important role in student development apart from the academic side.

Media refers to anything that can transmit information from an information source to the information recipient (Muhson, 2010). The teaching and learning process is fundamentally a form of communication. Therefore, the media used in this process is referred to as learning media. Learning media are components of learning resources, encompassing both software (such as learning materials) and hardware (such as learning tools). (A. P.

Wulandari et al., 2023). The influence of learning media in education is significant, as it improves learning outcomes and student engagement. Various studies emphasize the importance of utilizing different types of media, such as social media applications, online collaboration tools and computer-assisted translators, to improve learning effectiveness (An, 2023; Hasanah Lubis et al., 2023; Wani et al., 2023).

Based on the results of surveys and interviews conducted by researchers with physical education teachers and students at SMKN 1 Kalinyamatan Jepara, it is known that the provision of volleyball material involves the use of Student Worksheets (LKS), Package Books, and Power Point presentations. This material is given on the same day as the practical session in the field. In addition, the researcher also asked the teachers whether they asked the students to study at home before the volleyball lesson, and the answer was "Yes". However, when asked students whether they study at home before volleyball learning, only 2 out of 40 students admitted to doing so. In this condition, students have difficulty in understanding the basic techniques of volleyball because the material is given directly during practice on the field, without any previous description.

The use of Android-based learning media has shown significant influence in improving learning outcomes and student interest in various educational settings. Studies have shown that Android-based learning media can effectively improve students' mathematical creative thinking ability, as evidenced by the increase in N-Gain scores and significant differences in learning outcomes between experimental and control groups (Agus & Sholahudin, 2023). In addition, the development of Android-based learning media has been found to be feasible, practical, and effective in improving students' scientific argumentation skills, especially during the pandemic, highlighting its importance in online learning environments (Ramdani et al., 2023). This research has the main objective to develop learning media for basic techniques in playing volleyball based on Android. This application is designed with the aim of making it easier for teachers to provide learning media for volleyball games. The difference between this research and other studies is in the media made with volleyball material applied in physical education subjects volleyball material.

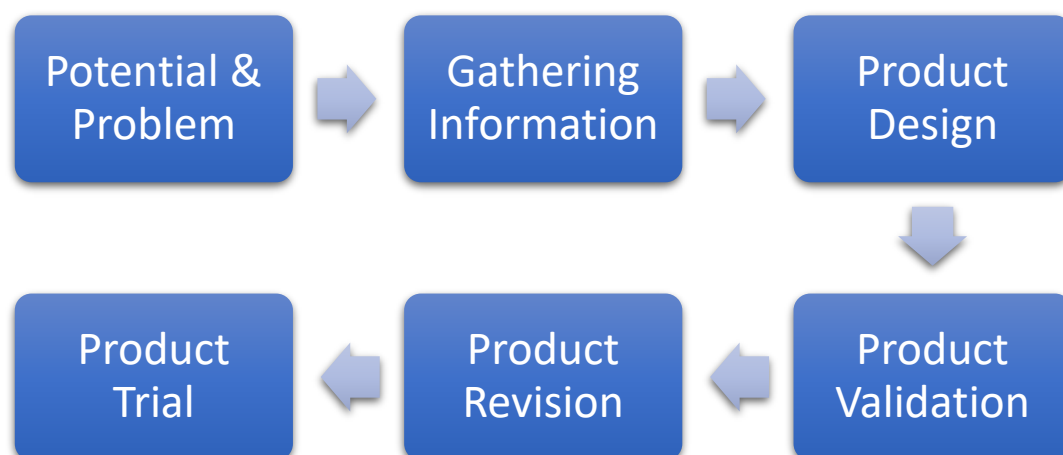
Based on the background of the above problems, researchers developed an android-based volleyball learning media with the name "My Volleyball" for high school students.

## **Method**

This research adopts the research and development method. Research and Development (R&D) is a methodological approach aimed at creating new knowledge, improving existing processes, or developing new products or services. In the field of education, R&D plays an important role in improving teaching strategies, learning materials, and the overall quality of education (Adnan et al., 2020).

The subject group of this study consisted of two material experts and two media experts, the trial was conducted on grade X and grade XI students at SMKN 1 Kalinyamatan, Jepara. The small-scale trial was conducted on class XI, involving 32 students, while the large-scale trial was implemented on class X students with a total of 166 students.

Research and Development stage according to (Sugiyono, 2015) which will be presented bellow



**Figure 1.** Research & Development Stage

in the picture above can be detailed as follows;

Step 1 (Potential & Problem) :

- Analyzing the required media

Step 2 (Gathering Information) :

- Distribute questionnaires to students as the needs
- Make the theme as the students' need
- Make the use of learning media volleyball with Android App (My Volleyball)

Step 3 (Product Design) :

- Make android app with called My Volleyball

Step 4 (Product Validation) :

- Evaluate the product to the expert (two material expert & two media expert)

Step 5 (Product Revision) :

- Process of giving correction and improving the product

Step 6 (Product Trial) :

- Try the media to student (small scale trial & large scale trial)

The data collection technique used is a questionnaire, while the data analysis uses quantitative descriptive analysis with a percentage score range from very poor to very good.

**Table 1.** Assessment Guidelines

Score	Category
0 – 55%	Very Poor
56 – 65 %	Deficient
66 – 80 %	Good
81 – 100%	Very Good

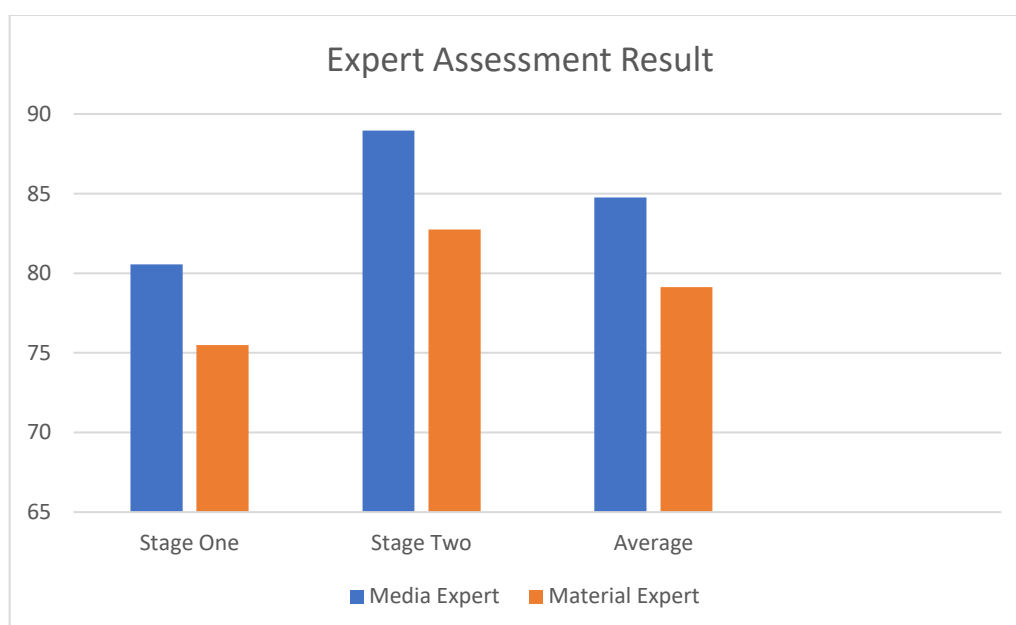
(Suharyanto, 2007)

## Results and Discussion

The media expert assessment was carried out two times with an assessment of the display aspects and programming aspects with an average score at stage one of 80.55% and at stage two of 88.95%. The material expert assessment was carried out two times with an assessment of the material aspects of SCAR Kids and video assessment with an average score at stage one 75.5% and at stage two 82.75%. The data can be seen in detail in table 2 below

**Tabel 2.** Data from expert assessments

	Media Expert	Material Expert
Stage One	80.55	75.5
Stage Two	88.95	82.75
Average	84.75	79.125



**Figure 2.** Diagram of expert assessment results

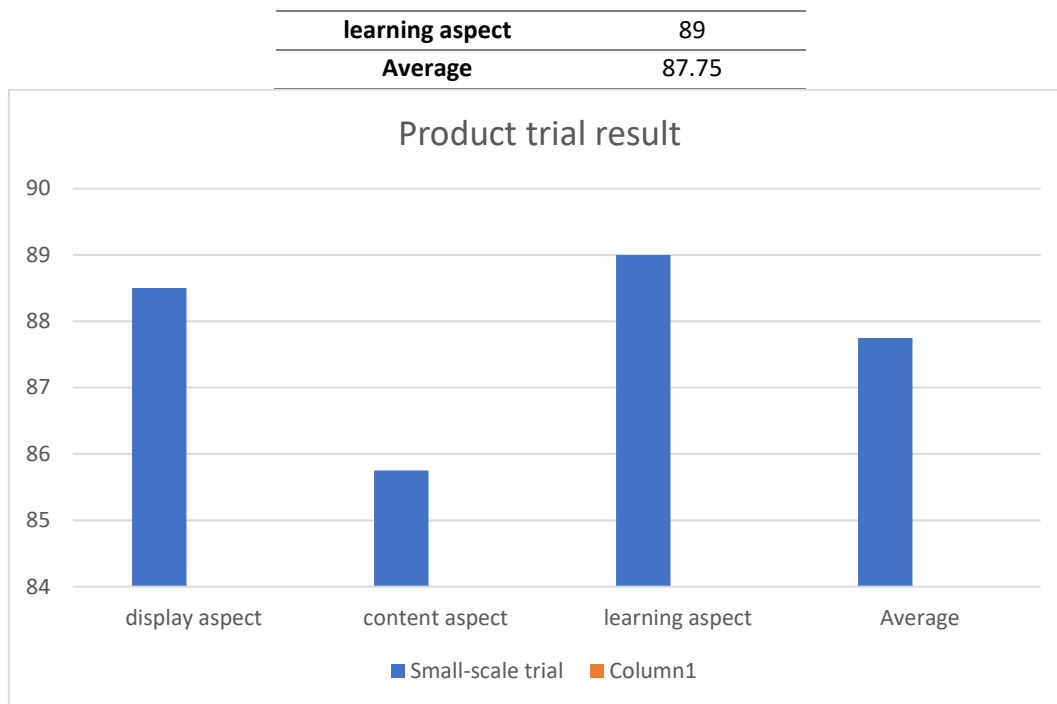
Based on the data above, the results of the average media expert assessment are 84.75% or in the very good category. Meanwhile, the results of the average material expert assessment are 79.125% or in the good category.

The pilot test was conducted through a small-scale trial involving 32 students in class XI and a large-scale trial involving 166 students in class X. The assessment questionnaire consists of 3 aspects, namely appearance aspects, content aspects, and learning aspects.

The results of the small-scale trial obtained an average of 87.75% and the results of the large-scale trial obtained an average of 85.92%. data on the assessment of small-scale and large-scale trials are in the following table.

**Tabel 3.** Data from product trial results

	Small-scale trial
display aspect	88.5
content aspect	85.75



**Figure 3.** Data diagram of product trial results

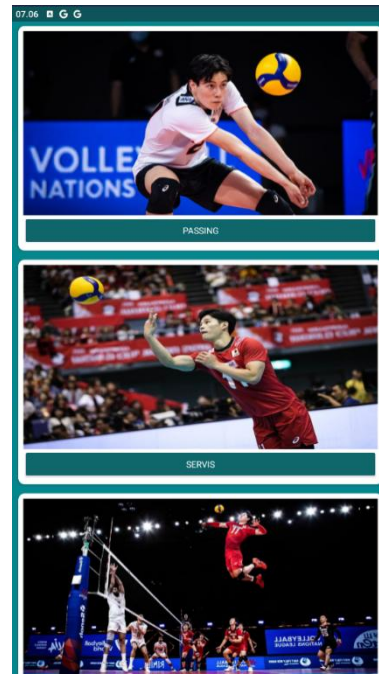
Based on the data above, the average data from the small-scale trial results scored 87.75% or fell into the very good category and the average results of the large-scale trial scored 85.92% or fell into the very good category.

## DISCUSSION

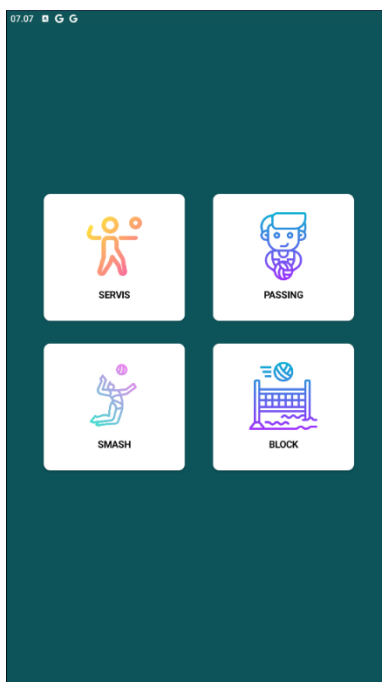
My Volleyball is an android-based learning media created to assist students in learning basic volleyball techniques. with the background of students who feel bored with volleyball learning material and also variations in the use of media that only use power point material displays, My Volleyball is proven to be suitable for use because the test results from media experts are 84.75% and from material experts are 79.12. This is because the learning media installed on each student's smartphone makes it easier for students to learn anytime and anywhere. The material is also easy to understand because there are pictures and videos, there is suitability of content with learning objectives and is equipped with practice questions that can hone students' abilities (Amirullah & Hardinata, 2017; D. A. Wulandari et al., 2019). Here are some views of the “My Volleyball” app:



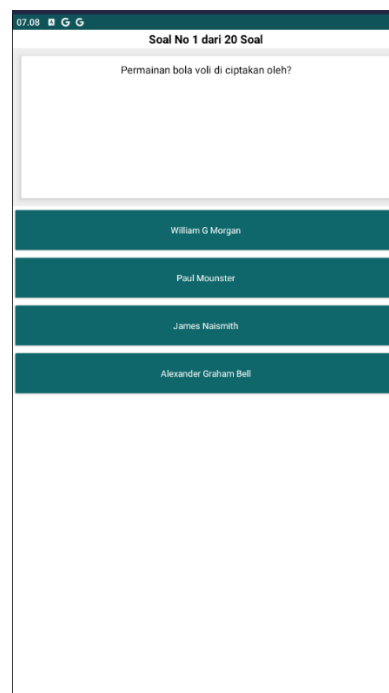
**Figure 4.** Main menu display



**Figure 5.** Technique menu display



**Figure 6.** Video menu display



**Figure 7.** Question menu display

Learning media makes it easier for students to understand learning, increase student interest in learning. Make learning more innovative, interesting and efficient (Nurrita, 2018). Some of the research results that are in line with this research are from (Nurhamidah et al., 2022) who states

that the use of interactive learning media based on Articulate Storyline produces media that is suitable for use to support learning activities in the classroom and during self-study. Another research from (Royana et al., 2023), namely the development of javelin throwing learning media with the name My Javelin Throw, has proven to be feasible and increase student interest in learning athletic learning javelin throwing material. So it can be said that the development of android-based volleyball learning media with the name "My Volleyball" is feasible to use as a learning media.

## Conclusion

Based on the results of the validation of media experts and material experts with very good categories, the results of product trials from both small scale and large scale with very good categories, it can be concluded that android-based volleyball learning media with the name "My Volleyball" is said to be suitable for use as a learning media.

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