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Development of Application Based Football Learning

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Abstract

The method used in this research is to use R & D research methods used to develop products in the form of application based soccer learning devices. The subjects in this study involved students from the sports science faculty (FIK) with a small scale trial involving 20 students of sports coaching education (PKO) and a large-scale trial involving 40 creative and recreational physical education students (PJKR). The results of the assessments of 3 experts showed the results of 93% assessments of learning experts, 93% of media experts' assessments and 90% of soccer lecturers. The results of the small group trial showed a percentage of 88%, the large group trial showed a percentage of 90%. The conclusion in this study is that the development of application-based soccer learning is feasible to be used as a support in soccer learning.

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INTRODUCTION

Physical education is a form of educational activity process carried out with the aim of increasing knowledge, movement skills and body fitness (Adi & Fathoni, 2019). (Gunawan et al., 2021) explains that physical education is an educational process that uses physical activity to achieve its goals, namely for physical development, movement development, mental development, and social development.

To improve the quality of learning really requires the use of technology-based learning media. The use of technology-based learning media in learning can form a learning atmosphere in which students can actively participate. Learning media is a liaison between teachers and students, thanks to the media students are no longer limited by the boundaries of the classroom. Of course, the role of TPACK-based learning (Technological Pedagogical Content Knowledge) is very large in improving the quality of learning itself. Especially since the outbreak of the COVID-19 pandemic that hit all over the world at the end of 2019, which is still ongoing and has forced the world of education, the learning process must be done online.

The implementation of online learning cannot be separated from the use of technology. This is because in online learning, lecturers and students or between teachers and students, learning does not occur face-to-face. The process of interaction between teachers and students is carried out using information and communication technology. Educators and students can communicate directly in two directions which are bridged by the use of media, such as computers, television, radio, telephone, internet, video, and so on. The role of information and communication technology is very large in the development of TPACK-based learning media.

Therefore, lecturers can consider developing more effective and modern learning tools (Kristiono et al., 2019) (Manalu et al., 2020) (Taqwim et al., 2020) (Amiruddin & Kurniawan, 2021). Because teachers need a conducive and fun learning situation as a vehicle for professional learning (Basuki, 2019) (Dwiyogo & Radjah, 2020) (Amiruddin & Kurniawan, 2021) (Manalu et al., 2020). Previous research according to (Amiruddin & Kurniawan, 2021), stated that the results of the study showed that interactive multimedia-based learning media in soccer learning courses were feasible and could be used as learning media with product development making it easier for students to access soccer learning lecture materials through the application. .

In this digital 4.0 era, the role of lecturers is no longer the only source of information in obtaining student knowledge, thus lecturers are required to be able to utilize and operate information and communication technology through the internet network. In this case, the lecturer must be able to ensure that teaching and learning activities continue, even though students are at home. Thus, lecturers are required to be able to design learning models as innovations by utilizing learning media that can be accessed online. Learning media designed by lecturers must of course be able to contain elements that are in accordance with the material and characteristics of the lecture material to be taught. One solution that can be applied to overcome these problems (Supriadi et al., 2022).

Previous research according to (Mesnan et al., 2019), stated that the results showed that the product of developing a football game pocket book could be used by elementary school students en masse. students think that there

are many advantages of this product, namely very good and attractive appearance, pocket books can be carried everywhere, material is easy to understand, because it is explained with pictures, with this book students can learn easily to help learning so that it can increase motivation and interest students to learn big ball games, especially football. Previous research according to (Siregar et al., 2020), in his journal stated that soccer is a simple game. Soccer is a team sport played by each team of eleven people with the aim of scoring a goal against the opponent's goal. Meanwhile, according to, Therefore, by learning football, students must be able to practice variations of basic movements combined in soccer games.

In the basic soccer technical skills course in the Sports Coaching Education (PKO) study program at the Faculty of Sports Science (FIK), of course, it requires various media and learning resources that can foster students' creativity, in this era of the covid 19 pandemic as a reference for students. This is because the process of learning basic soccer technical skills is carried out online, which requires lecturers to be even more creative in designing the learning media that will be used. Learning media design must be able to stimulate and motivate students to be active in movement activities in accordance with the needs of basic soccer technical skills courses. One of the learning media needed in learning basic soccer technical skills is application-based soccer learning media. Application-based soccer learning media is an application designed to assist lecturers in teaching soccer learning, this application itself can be used via computers and android so that it will assist lecturers in delivering the lecture material they are caring for.

METHODS

This type of research is research and development, namely the type of research used to produce certain products, and to test the effectiveness of these products (Putri & Wardoyo, 2018). This research and development procedure uses simplified steps. The research design for the development of the Borg and Gall development model was then changed to a simpler one involving seven main steps: 1) carrying out a needs assessment or needs analysis, (2) implementing a product design, (3) developing a product, (4) implementing it in the field, (5) evaluate the product. Based on these steps is a step in solving problems in research and later can produce a product. Researchers in the trial design will carry out a study based on notes and input from three experts consisting of learning experts, media experts, and soccer experts. The subjects in this study involved students from the sports science faculty (FIK) with a small-scale trial involving 20 students of sports coaching education (PKO) and a large-scale trial involving 40 creative and recreational physical education students (PJKR). Later notes and suggestions from experts can be used as guidelines in revising the initial product in the research product. The data obtained are based on expert reviews and the implementation of product trials in the form of quantitative and qualitative data. Qualitative data was obtained through notes and input from several experts. Basically, quantitative data is obtained when small and large group trials are the results of collecting questionnaires in the form of numbers.

In the technical stage of analyzing data during research, using descriptive statistics. Data collection is carried out using a measurement technique using a Likert scale, which is used to see attitudes, ideas and perceptions of individuals or a particular community about social phenomena (Putri & Wardoyo, 2018). The

instrument on the Likert scale has response categories that include strongly agreeing to disagree. In the need to analyze response quantitative data, patented scores can be affixed, including (1), (2), (3) and (4).

Table 1. Evaluation Scale of Statement

No	Category	Choice	Score
1	Strongly Agree	A	4
2	Agree	B	3
3	Hesitate	C	2
4	Disagree	D	1

The formula for obtaining quantitative descriptive data with the percentage said by Dimas Chandra (2021).

$$V = \frac{TSEV}{S - max} x\ 100\%$$

Information:
V : Validity
TSEV : Total Empirical Score Validator
S-max : Maximum Expected Score
100% : Constants

Table 2. Parameter Product Status

Percentage	Category	Meaning
75.01%-100.00%	Very Valid	Can Be Used Without Revision
50.01%-75.00%	Fairly Valid	Can Be Used With Revision
25.01%-50.00%	Invalid	Unusable
00.00%-25,00%	Very Invalid	Forbidden To Use

RESULT

This study aims to develop application-based soccer learning. The research carried out is expected to be able to become a treasury for lecturers of the sports science faculty in teaching soccer learning. The results of expert validation carried out by experts related to the research that the researcher developed, namely learning material experts, soccer lecturer experts and media experts. The results of the expert assessment of the application-based soccer learning development draft can be seen in **Table** 3 as follows:

Learning Expert Assessment Results

Table 3. Learning Expert Validation Results Data.

No	Aspects Assessed	Percentage	Category
1	Clarity	89%	Very Valid
2	Accuracy	91%	Very Valid
3	Ease	100%	Very Valid
Average		**93**	**Very Valid**

The results of data analysis shows application-based soccer learning device development products have shown a very valid classification with percentage 94% based on aspects that are assessed and suitable for use obtained from the assessment of learning experts.

Learning Expert Assessment Results

Data analysis obtained from media experts with 6 indicators on application-based soccer learning development products can be seen in Table 4. Following:

Table 4. Media Expert Validation Result Data

No	Aspects Assessed	Percentage	Category
1	Accuracy	89%	Very Valid
2	Completeness	91%	Very Valid
3	Convenience	100%	Very Valid
4	Attractiveness	90%	Very Valid
5	Conformity	92%	Very Valid
6	Clarity	95%	Very Valid
Average		**93**	**Very Valid**

The results of data analysis shows the product development of application-based soccer learning tools has shown a very valid classification with a percentage

of 93% based on the aspects that are assessed and suitable for use obtained from the assessment of media experts.

Soccer Expert Assessment Results

Analysis of data obtained from soccer experts based on 5 aspects which can be seen in Table 5 as follows:

Table 5. Football Expert Assessment

No	Aspects Assessed	Percentage	Category
1	Clarity	90%	Very Valid
2	Ease	90%	Very Valid
3	Attractiveness	90%	Very Valid
4	Conformity	90%	Very Valid
5	Accuracy	90%	Very Valid
Average		**90**	**Very Valid**

From the results of data analysis it shows that the product development of application-based soccer learning tools has shown a very valid classification with a percentage of 90% based on the following aspects: aspects that are assessed and suitable for use are obtained from the assessment of soccer experts.

The results of the assessments from 3 experts, namely learning experts, media experts and soccer experts can be seen in Figure 1 as follows:

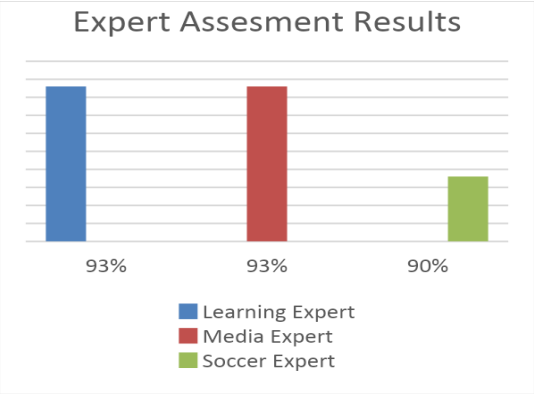

Figure 1. Assessments

Small-Scale Trial Results The

Results of small-scale trials were carried out on 20 students of the sports science faculty majoring in sports coaching education. The data from the results of the trials carried out can be seen in Table 6 as follows:

Table 6. Data on Assessment Results on Small Scale Trials

No	Aspect	Percentage	Category
1	Clarity	85 %	Very Valid
2	Ease	88%	Very Valid
3	Attractiveness	88%	Very Valid
4	Conformity	88%	Very Valid
5	Usefulness	91%	Very Valid
Average		**88**	**Very Valid**

From table 6 above it can be concluded that the android-based soccer learning development product can be used with a value of 88% and with a valid category classification.

Results of

Large-scale trials The results of large-scale trials conducted on 40 students of the sport science department majoring in physical education, health and recreation. The data from the results of the trials carried out can be seen in **Table 7** as follows:

Table 7. Data on Assessment Results on Large Scale Trials

No	Aspect	Percentage	Category
1	Clarity	90 %	Very Valid
2	Ease	91%	Very Valid
3	Attractiveness	89%	Very Valid
4	Conformity	92%	Very Valid
5	Usefulness	90%	Very Valid
Average		**90**	**Very Valid**

From the results of small-scale and large-scale trials it can be concluded that the results of small and large-scale trial data are in the very good category. The results of small-scale and large-scale trials can be seen in **Figure 2.** Graphics of small and large-scale trials are as follows.

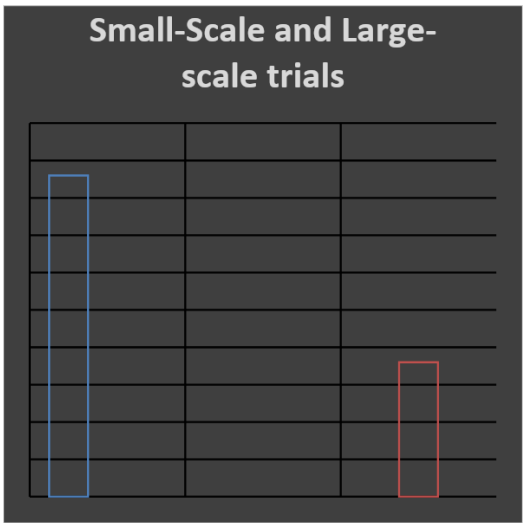

Figure 2. Graphics Small and Large Scale Trial

DISCUSSION

The research that researchers produce is an android-based soccer learning development product which includes pictures, explanations and videos, android itself was chosen because of the efficiency value of the android, meaning that android can be taken anywhere by its nature which makes it easy for the user to use the product. (Firlando et al., 2020) Android is a subset of software for mobile devices that includes an operating system, middleware and core applications released by Google. While the Android SDK (Software Development Kit) provides the tools and APIs needed to develop applications on the Android platform using the Java programming language. This is in line with research conducted by Dimas (Gunawan et al., 2021) explaining that football development products based on the articulate storyline application are suitable for use in 6th grade football learning and can be used as a support for learning in class VI, especially in soccer learning materials.

As is the case according to the opinion (Amiruddin & Kurniawan, 2021) which states that the learning outcomes of classes using articulate storyline learning media for social studies subjects increase by 70% compared to classes that have not used supporting media. The use of media as a means of learning in schools aims to make it easier for students to understand the material. So that later goals in learning competencies can be achieved, this is in line with (Larsson & Karlefors, 2015), in their journal which suggests that teachers are not the only source of learning, because being a teacher must have learning strategies that will help students to understand educational activities. One of them is developing learning media.

According to previous research (Amiruddin & Kurniawan, 2021), in his journal which states that creative learning, one of which is by utilizing media content that involves students, will unwittingly increase student motivation in the learning process which will certainly affect student learning outcomes. In line with this opinion, previous research according to Rahman, (Amiruddin & Kurniawan, 2021) stated that the results showed that the physical fitness learning product of the element of speed at SMA Negeri 1 Turen was suitable for use in learning and as a reference for learning resources, especially physical education subjects, health and sports. class X and XI. Students are more active and very enthusiastic in participating in lessons in the element of speed physical fitness using interactive multimedia. In line with (Amiruddin & Kurniawan, 2021), stated that research resulted in the development of mobile learning-based learning media products for physical fitness activities of SMKN 1 Batu students. The results of the study show the maximum

value or the Very Good index, so it can be concluded that the development of physical fitness learning media is very valid to be used for classroom teachers, students, coaches and the general public who want to learn physical fitness. So that the articulate storyline application is classified as an efficient learning tool where this product is an android application that can be accessed easily and can be used before learning in the field.

In the android application developed by this researcher, there are several features that can be used in teaching physical education learning, especially soccer material. (Supriadi et al., 2022) In the application there is also a soccer learning video feature which contains basic techniques in soccer games, the purpose of the video feature in the application is to make it easier for teachers / lecturers to teach learning basic soccer technical material by good and right and can also help students learn to be independent interactively in doing and practicing basic techniques in soccer games whose aim is to improve their ability/understanding of the basic skills of playing soccer. (Mesnan et al., 2019) explains that in soccer games there are basic techniques that need to be mastered by a soccer player so that the player is able to play soccer games, as for the things that a soccer player needs to have, namely: (1) ball feeling, (2) passing, (3) controlling, (4) heading, (5) shooting, (6) throw-in, these basic techniques are an absolute requirement for soccer players if they want to play soccer.

From the development of android-based soccer learning products, it is expected to be able to increase student interest in learning physical education, especially soccer material, besides that it can increase the treasury of technology-based soccer learning materials using android applications.

CONCLUSION

From the discussion above, it can be concluded that soccer learning media can be implemented properly based on Android. The system can be accessed through any device using the Android operating system anywhere and anytime so that users can access the learning media portable.

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REFERENCES

Adi, S., & Fathoni, AF (2019). Development of Learning Model Based on Blended Learning in Sports School. 362(Acpes), 8–12. https://doi.org/10.2991/acpes-19.2019.2

Amiruddin, MF, & Kurniawan, AW (2021). Development of Massage Therapy Learning Media Based on Articulate Storyline Application. Sport Science and Health, 3(7), 533–542. https://doi.org/10.17977/um062v3i72021p533-542

Basuki, S. (2019). Transparency in the Recruitment of Physical Education Supervisors at Elementary Schools in Banjarbaru City. Multilateral Journal of Physical Education and Sport, 18(2), 130–142. https://doi.org/10.20527/multilateral.v18i2.7625

Dwiyogo, WD, & Radjah, CL (2020). Effectiveness, efficiency and instruction appeal of blended learning model. International Journal of Online and Biomedical Engineering, 16(4), 91–108. https://doi.org/10.3991/ijoe.v16i04.1338

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Firlando, R., Frima, A., & Sunardi, L. (2020). Applications for Learning Basic Football Techniques Based on Android. Mura Journal of Information Technology, 12(02), 166–172. https://doi.org/10.32767/jti.v12i02.1097

Gunawan, DC, Wiguno, LTH, Kurniawan, AW, & Mu'arifin, M. (2021). Development of Articulate Storyline Application-Based Soccer Learning Toolkit. Sport Science and Health, 3(4), 167–179. https://doi.org/10.17977/um062v3i42021p167-179

Kristiono, ID, Dwiyogo, WD, & Hariadi, I. (2019). Blended Learning-Based Sports Nutrition Science for Students of Physical Education, Health, and Recreation. Journal of Education: Theory, Research, And Development, 4(2), 235. https://doi.org/10.17977/jptpp.v4i2.12004

Larsson, H., & Karlefors, I. (2015). Physical education cultures in Sweden: fitness, sports, dancing … learning? Sport, Education and Society, 20(5), 573–587. https://doi.org/10.1080/13573322.2014.979143

Manalu, DL, Dwiyogo, WD, & Heynoek, FP (2020). Development of Interactive Multimedia Strength Training in Basic Physical Condition Specialization Courses for Students of Sports Coaching Education, Faculty of Sports Science. Sport Science and Health, 2(1), 49–57. http://journal2.um.ac.id/index.php/jfik/article/view/11158

Mesnan, M., Supriadi, A., & Siregar, I. (2019). Development of a Football Learning Log Book With a Tactical Approach. Journal of Achievement, 3(6), 68. https://doi.org/10.24114/jp.v3i6.15895

Putri, RS, & Wardoyo, C. (2018). The Development of Financial Accounting Learning Tools with Gall and Borg Model. Educational Dynamics, 12(2), 86–97. https://doi.org/10.15294/dp.v12i2.13559

Siregar, FR, Simatupang, N., & Valianto, B. (2020). The Effect of Small Sided Games Training Toward Improvement of Basic Soccer Techniques at Perfect Unimed School Students. 23(UnICoSS 2019), 213–215. https://doi.org/10.2991/ahsr.k.200305.059

Supriadi, A., Akhmad, I., Dewi, R., Mesnan, I., Akhmad, R., & Dewi, S. (2022). The Effect of Learning Manipulative Skills Using Ball Thrower Learning Media on the Ability to Throw and Catch the Ball in Elementary School Students. International Journal of Education in Mathematics, 10(3), 590–603.

Taqwim, RI, Winarno, ME, & Roesdiyanto, R. (2020). Implementation of Physical Education, Sports, and Health Learning. Journal of Education: Theory, Research, And Development, 5(3), 395. https://doi.org/10.17977/jptpp.v5i3.13303