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Modification of interactive multimedia with the ARA MODEL: study of development of football learning models in pandemic times

Modificación de multimedia interactivo con el ARA MODELO: estudio del desarrollo de modelos de aprendizaje del fútbol en tiempos de pandemia

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Abstract. Background and Study Aim. The learning process is very important in education. Learning is a process of educational interaction designed to make students learn actively and be able to change their behavior through learning experiences. Learning was done online during the Covid-19 epidemic. As a result, educators must think creatively in order for material delivered to be understood through using interactive learning medium. This study intends to create a product in the form of interactive football multimedia for use in football courses as part of the learning process, particularly during the Covid-19 Pandemic. Materials and Methods . This study uses the research and development method developed by Borg and Gall. Where the stages are divided into 3, namely: (1) Pre-development stage, at this stage, conduct a needs analysis through a survey of the level of product needs for users, then prepare instruments and consult experts. (2) The development stage, developing a product that starts with designing the initial product and compiling the "Football Interactive Multimedia" script. Where in this study, there was a phase I trial of 30 students and a group II trial of 60 Medan State University Sports Science students. Furthermore, small group trials, stage I improvement, big group trials, stage II improvement, and mass production will be carried out. (3) The evaluation stage, product implementation, and product diffusion as a learning media tool for students. Results. The results showed that learning using interactive multimedia on soccer material is very good, with a percentage of 80%. The results obtained are due to the completeness of the material presented and the clarity of the material's explanation. where 15% said good and only 5% answered no. The results also show that the assessment of the media aspect gets a score of 4.46 or is included in the percentage of 80%. The results also show that the assessment of the media aspect scored 4.46 or entered the Very Good category. Furthermore, the material aspect has a score of 4.07, or in the Good category, and the learning aspect has a score of 4.36, or in the Very Good category. Next, the overall average score is 4.28, or in the Very Good category. **C**onclusions. It can be concluded from the results that the development of interactive multimedia ARA MODEL in soccer lectures is very feasible. Using interactive soccer multimedia as a learning model during a pandemic can increase students' understanding of basic techniques in soccer games.
Keywords: Interactive Media, Soccer, ARA MODEL, Learning Model

Resumen. Antecedentes y objetivo del estudio. El proceso de aprendizaje es muy importante en la educación. El aprendizaje es un proceso de interacción educativa diseñado para que los alumnos aprendan activamente y sean capaces de cambiar su comportamiento a través de experiencias de aprendizaje. El aprendizaje se hizo en línea durante la epidemia de Covid-19. En consecuencia, los educadores deben pensar de forma creativa para que el material entregado se comprenda utilizando un medio de aprendizaje interactivo. Este estudio pretende crear un producto en forma de multimedia de fútbol interactivo para su uso en cursos de fútbol como parte del proceso de aprendizaje, especialmente durante la pandemia Covid-19. Materiales y métodos. Este estudio utiliza el método de investigación y desarrollo desarrollado por Borg y Gall. Donde las etapas se dividen en 3, a saber: (1) Etapa de pre-desarrollo, en esta etapa, realizar un análisis de las necesidades a través de una encuesta sobre el nivel de las necesidades del producto para los usuarios, a continuación, preparar los instrumentos y consultar a expertos. (2) La etapa de desarrollo, desarrollar un producto que comienza con el diseño del producto inicial y la compilación del guión de "Fútbol Multimedia Interactivo". En este estudio, se realizó una prueba en la fase I con 30 estudiantes y una prueba en el grupo II con 60 estudiantes de Ciencias del Deporte de la Universidad Estatal de Medan. Además, se llevarán a cabo ensayos en grupos pequeños, la fase I de mejora, ensayos en grupos grandes, la fase II de mejora y la producción en masa. (3) La fase de evaluación, la aplicación del producto y la difusión del producto como herramienta de aprendizaje para los estudiantes. Resultados. Los resultados mostraron que el aprendizaje mediante multimedia interactivo sobre material de fútbol es muy bueno, con un porcentaje del 80%. Los resultados obtenidos se deben a lo completo del material presentado y a la claridad de la explicación del material. donde el 15% dijo que era bueno y sólo el 5% respondió que no. Los resultados también muestran que la evaluación del aspecto de los medios de comunicación obtiene una puntuación de 4,46 o está incluida en el porcentaje del 80%. Los resultados también muestran que la evaluación del aspecto material obtiene una puntuación de 4,46 o entra en la categoría de Muy buena. Además, el aspecto material tiene una puntuación de 4,07, o sea, en la categoría Bueno, y el aspecto aprendizaje tiene una puntuación de 4,36, o sea, en la categoría Muy Bueno. A continuación, la puntuación media global es de 4,28, o sea, en la categoría Muy buena. Conclusiones. De los resultados se puede concluir que el desarrollo del MODELO ARA multimedia interactivo en las clases de fútbol es muy factible. El uso de multimedia interactiva de fútbol como modelo de aprendizaje durante una pandemia puede aumentar la comprensión de los estudiantes de las técnicas básicas en los juegos de fútbol.
Palabras clave: Multimedia interactiva, fútbol, MODELO ARA, modelo de aprendizaje

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Introduction

As the Covid-19 pandemic continues, the years 2020–2021 will be extremely difficult for all of humanity. Where Covid-19 is a coronavirus 2 acute respiratory syndrome-related viral illness. This novel coronavirus was found in 2019 in Wuhan, Hubei, China (Pinho, Caria, Júnior, & Pitanga, 2020). However, transmission is so rapid that the disease has impacted communities globally (Malik & Sukiman, 2021). This is also reinforced by evidence that, as of July 19, 2020, there had been confirmed >597,000 deaths worldwide and more than 14 million cases (Mulcahey, Gianakos, Mercurio, Rodeo, & Sutton, 2021). Some studies say that the Covid-19 pandemic has also had an impact on the world of sports (Bowes, Lomax, & Piasecki, 2021; Horky, 2020; Hortigüela-Alcalá, Hernando-Garijo, &

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Pérez-Pueyo, 2021; Hughes et al., 2020; Suryadi, Samodra, & Purnomo, 2021), where the closure of several soccer clubs was also carried out (Ambroży et al., 2021). So that the lack of sports activities will certainly have an impact on body fitness (Martins, Honório, & Cardoso, 2023; Rubiyatno et al., 2023; Suryadi, 2022; Suryadi & Rubiyanto, 2022; Suryadi, Suganda, et al., 2023).

Furthermore, this condition turned out to cause an international health emergency (Kaharina, Akbar, Wiriawan, & Setijono, 2021; Setyawan, Setiawati, Dharmawan, & Pramesti, 2021; Wong et al., 2020), and had an impact on the tourism industry (Mirehie & Cho, 2022), so this caused an economic crisis in each country. In addition, since March 2020 in Chile, the Covid-19 pandemic that has occurred has affected the participation of child and youth athletes in physical activity, sports, and education (Rosales et al., 2020). A study says Covid-19 has caused one of the biggest disruptions in learning in history (Betthäuser, Bach-Mortensen, & Engzell, 2023). Several narrative reviews summarize the emerging research on covid-19 and learning. Most focus on the relatively early progress of learning in the pandemic (Donnelly & Patrinos, 2022; Hammerstein, König, Dreisörner, & Frey, 2021; Zierer, 2021). Based on this explanation, it is clear that Covid-19 has many good and bad impacts on all living things. So many efforts have been made by the government to minimize transmission cases, namely by implementing mandatory isolation under national regulations (Ayala, Pujol, & Abellán, 2018).

In addition, two reviews coordinate and unify estimates of existing declines in learning during pandemics (König & Frey, 2022). People may believe that children can regain the knowledge they lost during the early pandemic. Once teachers and families have had time to adjust to the new learning environment, and the structure for online learning and reversing the decrease in early learning has been established (Betthäuser et al., 2023). The Republic of Indonesia's Minister of Education and Culture for Research and Technology published Edaran No. 4 Year 2020 on the Implementation of Education Policy through Online and Distance Learning (Pusdiklat Kemdikbud, 2020). Learning resources done offline and online become options to bridge as electronic learning resources (e-learning). Next is the difficulty of getting rid of the learning resources used in the classroom. Thus, the online and offline learning system is a learning system based on Information and Communication Technology (TIC) with remote use of applications that connect with many people in groups or as individuals (Curtis & Lawson, 2001).

The problems that occurred, the execution of football courses is one of the compulsory courses in the Faculty of Sports Science of the State University of Medan (Unimed). However, during the pandemic, various learning activities in the classroom were carried out online. Therefore, it is necessary to have the right media so that the biased football classroom runs smoothly. Where the sided method will have a good impact on success in the game of football (Suryadi, Okilanda, et al., 2023). So the ability to think creatively is critical in order for material distribution to be understood. The idea is to provide interactive learning media on football topic so that students can understand the material's purpose. Learning is an educational interaction process to make students learn actively and be able to change their behavior through learning experiences (Bancin & Ambarita, 2020; Masdul, 2018). It also facilitates students learning according to their needs (Angga, Abidin, & Iskandar, 2022). The help provided by educators through learning is the process of acquiring knowledge and mastery of skills and habits, as well as the formation of attitudes and trust in students (Fitrah, Yantoro, & Hayati, 2022). In the 21st century, learning was developed with a wide range of models and strategies based on the character of competence and learning materials (Fitriyani, Supriatna, & Sari, 2021). Because learning can go well, one of the factors influencing it is the characteristics of the student (Safithri, Syaiful, & Huda, 2021).

It is vital to communicate a message to kids in order for them to learn from the media. An engaging and dynamic learning medium is essential for increasing student interest and motivation while also making the learning process easy to remember (Akhmad & Mesnan, 2019). In other words, multimedia has the ability to change the way people learn, acquire information, adapt information, and more. Multimedia also allows educators to experiment with new learning strategies to achieve the best results. With the advancement of this learning medium, it will be feasible to optimize it and become a game changer for educators, particularly teachers, by including interactive learning media football material. This should be the foundation for the importance of such interactive medium for learning survival during the Covid-19 epidemic.

It also has the advantage of having two senses working simultaneously (Herlina & Suherman, 2020). By improving the skills of educators is very important to improve the quality of education. (Trimantara, 2021). The creativity of teachers at the time of teaching is very helpful to learners in terms of mastering the material by providing guidance, directing, and making a good learning design. (Hasana, Sugihartono, & Raibowo, 2021). In addition, the development of media learning is one way to communicate so that it is easier to understand. (Pranata, Wahjoedi, & Lesmana, 2021). The achievement of learning sports and health education is bound by the presence of media learning, both through means and prasarana (Sukamto, Putri, & Aliriad, 2022). Based on the problem, interactive media will be created for the learning process. Thus, the research objective will be achieved to producing interactive football multimedia products on football courses that will be used in the process during the Covid-19 pandemic.

The right learning medium will be a means used to convey material information (Khozain & Mumaisaroh, 2020). The use of learning media provides positive results for educators and learners (Mashud, Arifin, et al., 2023; Mashud, Warni, et al., 2023). This is because it is able to create effective and efficient learning processes and make concentration more focused (Achmad, Suroto, & Nanik, 2021; Fauzi & Rosliyah, 2020). It also has the advantage of

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having two senses working simultaneously (Herlina & Suherman, 2020). By improving the skills of educators is very important to improve the quality of education (Aziz, Okilanda, Permadi, et al., 2023; Aziz, Okilanda, Rozi, Suganda, & Suryadi, 2023; Trimantara, 2021; Umar et al., 2023). The creativity of teachers at the time of teaching is very helpful to learners in terms of mastering the material by providing guidance, directing, and making a good learning design (Hasana, Sugihartono, & Raibowo, 2021). In addition, the development of media learning is one way to communicate so that it is easier to understand (Pranata, Wahjoedi, & Lesmana, 2021; Yogi, Perdana, Supriatna, & Haïdara, 2023). The achievement of learning physical education sports and health is bound by the existence of learning media both facilities and infrastructure (Sukamto, Putri, & Aliriad, 2022). Based on the problem, interactive media will be created for the learning process. Previous research has conducted many developments in soccer learning during the Covid-19 pandemic. Among them are the development of sport-based positive youth (Bates, Greene, & O'Quinn, 2021), and interactive media (Akhmad, Valianto, & Bowo, 2021). However, research in the form of interactive multimedia, namely ARA MODEL, has not been found. So this is one of the updates and reasons why this research is important to do. Thus, the research objective will be achieved to producing interactive football multimedia products on football courses that will be used in the process during the Covid-19 pandemic.

Previous research has conducted many developments in soccer learning during the Covid-19 pandemic. Among them are the development of sport-based positive youth (Bates, Greene, & O'Quinn, 2021), and interactive media (Akhmad, Valianto, & Bowo, 2021). However, research in the form of interactive multimedia, namely ARA MODEL, has not been found. So this is one of the updates and reasons why this research is important to do.

Materials and Methods

Participants

The subjects of research on the development of interactive multimedia-based learning media for football are students of Sports Science at Medan State University. The sample determination in this study used random sampling. In this study, there was a phase I trial of 30 students and a group II trial of 60 students.

Research Design

This study employs Borg and Gall's Research and Development technique, or development research, which is a procedure for developing and validating educational products. This study was carried out in order to create learning medium called "ARA MODEL" with applications. The research process is divided into various stages: (1) the pre-development stage, in which a needs analysis is carried out by assessing the degree of product needs for users, preparing instruments, and contacting specialists. (2) Product development, beginning with the design of basic products and the drafting of "Football Interactive Multimedia", small group trials, stage I improvements, big group trials, stage II improvements, and mass production. (3) Evaluation stage, product implementation, and product dissemination as a learning media tool for Unimed's Faculty of Sports Science students.

Closed and open questionnaires were employed in the study instrument. When closed questions are used to assess the product's effectiveness and efficiency. While the open questionnaire is used during the Focus Group Discussion (FGD) to discover the product's shortcomings and incompatibility with product needs. Researchers used qualitative validation with data collection techniques such as direct questionnaires or questionnaires with choices to validate the feasibility of the android-based "Chemistry Laboratory Work Instructions" application as a practicum guide medium for football courses. The development steps can be seen in figure 1.

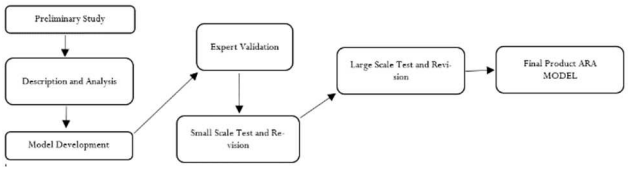

Figure 1. ARA MODEL Interactive Multimedia Research and Development Steps

Statistical Analysis

Data analysis methods include (1) needs analysis utilizing percentage approaches to determine the degree of product needs, and (2) FGD techniques to assess the product's efficacy and efficiency as a validity test by three experts in soccer, sports coaching, and IT. (3) Using quantitative and percentage-based approaches, phase I trials and group II trials were conducted to evaluate the product's efficacy and efficiency.

Data analysis for the product development process, including data on descriptions from media experts and material experts as well as data on the viability of learning media products as assessed by media experts and material experts. The quantitative analysis average and conversion formulas are as follows.

Table 1.
Product Assessment Criteria

Scale	Criteria	Interval Formula	Average Score
5	Very good	$X \geq Xi + 1,8\ SB_i$	$X > 4,2$
4	Good	$Xi + 0,6\ SB_i < X \leq Xi + 1,8\ SB_i$	$3,4 < X \leq 4,2$
3	Fair	$Xi - 0,6\ SB_i < X \leq Xi + 0,6\ SB_i$	$2,6 < X \leq 3,4$
2	Poor	$Xi - 1,8\ SB_i < X \leq Xi - 0,6\ SB_i$	$1,8 < X \leq 2,6$
1	Very Poor	$X \leq Xi - 1,8\ SBi$	$X \leq 1,8$

Results

A requirements analysis of 30 respondents, all students, revealed that 89% of respondents had never engaged in the learning process using interactive media and that 11% were unaware of this process, which would later be known as learning media.

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The inaugural interactive soccer media product was designed as a tool to aid in learning during the Covid-19 pandemic. Additionally, the functioning system of this interactive multimedia soccer "ARA MODEL" enables students to access it through the Playstore application so they can learn how to implement fundamental soccer skills like passing, heading, and shooting as well as be provided with explanations and tutorials for doing so.

The research product designed is then assessed by media and material experts, and in each stage, a stage I product trial will be carried out with a sample. The results of the media validation provided some input.

According to media experts, only the display design and programming receive a score of 3.5 and are classified as good, while the rest receive a score of 3 and are classified as adequate. Assessment of football interactive media indicators that receive a score of 3.2 and are still rated as adequate and require development before being tested on users. Table 2 displays the results.

Table 2.
Phase I Media Expert Assessment

No	Indicator	Score	Category
1	Display Design	3,5	Good
2	Display Text	3	Fair
3	Programming	3,5	Good
4	Video	3	Fair
5	Audio	3	Fair
	Total	16	
	Average	3,2	
Category of Media Quality		Fair	

According to the results of the "ARA MODEL" assessment of the soccer interactive media by a material expert, learning images, learning videos, and learning materials all received scores of 3.5, while the indicator for material explanation received a score of 3.7 and fell into the "good" category. The evaluation of these interactive media parameters for football yielded results that, with an overall average score of 3.55, are considered good but might be improved. Table 3 displays the outcomes.

Table 3.
Validation of Stage I Material Expert Assessment

No	Indicator	Score	Category
1	Learning Pictures	3,5	Good
2	Learning Videos	3,5	Good
3	Learning Materials	3,5	Good
4	Explanation of Material	3,7	Good
	Total	14,2	
	Average	3,55	
Category of Media Quality		Good	

After stage I validation and getting some improvements for product improvement, the researcher made product improvements so that later stage II validation would be carried out again by the expert. The results of stage II validation are as follows.

According to table 4, the results of stage II validation by the media expert above show an assessment of this "ARA MODEL" soccer interactive media product in which the display design indicators, display text, and programming receive 4.5 and 4.3 in the very good category, respectively, and the video and audio indicators receive 4 and 4.2 in the good category. The findings of the assessment of the "ARA MODEL" football interactive media indicators were characterized as very good, with an average score of 4.3, and the product can subsequently be tested to the test.

Table 4.
Phase II Media Expert Assessment

No	Indicator	Score	Category
1	Display Design	4,5	Very Good
2	Display Text	4,3	Very Good
3	Programming	4,5	Very Good
4	Video	4	Good
5	Audio	4,2	Good
	Total	21,5	
	Average	4,3	
Category of Media Quality		Very Good	

Following the enhancement of the stage I material examination, the researcher performs stage II validation. The learning image indicator and learning metrics received a rating of 4.3 in the very good category in the validation results of stage II. While visual learning received a 4.4, material explanation received a 4.5 in both categories. The overall material expert indicator evaluation results, with an average score of 4.37 for the category, are outstanding and qualify for product testing. Table 5 displays the results.

Table 5.
Validation of Stage II Material Expert Assessment

No	Indicator	Score	Category
1	Learning Pictures	4,3	Very Good
2	Learning Videos	4,4	Very Good
3	Learning Materials	4,3	Very Good
4	Explanation of Material	4,5	Very Good
	Total	17,5	
	Average	4,37	
Category of Media Quality		Very Good	

Improvements from both experts' validation findings give input for the interactive multimedia product "ARA MODEL," which may subsequently be utilized as a learning medium for football content for FIK Unimed students. The findings will be used by researchers to undertake experiments on sempel. As a consequence of the modifications, the interactive multimedia output of this fundamental football method may be employed in the I and II easy exams.

Group I consisted of 30 students who completed the user appropriateness test to assess the acceptability of interactive media. This course is broken into three sections: media, materials, and learning.

The interactive soccer multimedia produced by researchers received a 4.07 for media features in the initial field experiment. 3.58 for material aspects and 3.67 for learning factors, for a total of 3.79, placing it in the Good category. This type of media is appropriate for use as instructional media.

Table 6.
Results of Phase I Trial

Indicator	Score	Category
Aspects of Media	4,07	Good
Aspects of Material	3,58	Good

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Aspects of Learning	3,67	Good

The results on these three indicators show that the overall implementation of the phase I trial is still in the "Good" category, with input that still has to be improved to get maximum results in the phase II test.

The results of trial I were improved to improve the results of further research. The results of trial II obtained the following results.

According to the data in Table 5, the media receives an average score of 4.46 and is classified as "Very Good" in the media aspect. 4.07, or in the "Good" category for material, and 4.36, or in the "Very Good" category for learning. As a result, the total average score was 4.28, placing it in the "Very Good" category.

Table 7.
Results of Phase II Trial

Indicator	Score	Category
Aspects of Media	4,46	Very Good
Aspects of Material	4,07	Good
Aspects of Learning	4,36	Very Good

The explanation of the score reveals the overall outcomes of phase II trial implementation in the "Very Good" category, indicating that the product will be implemented and distributed later.

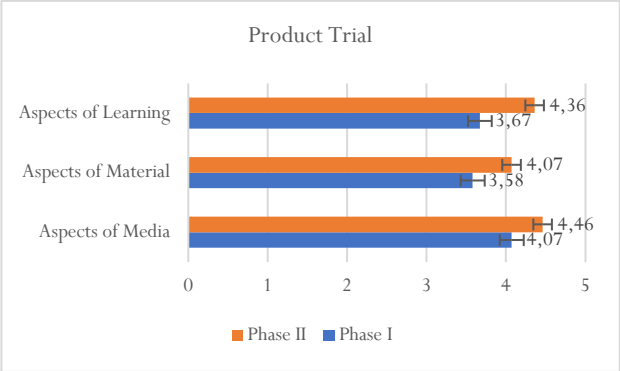

Figure 2. Phase I and Phase 2 Trial Results

Discussion

The study in this research explains the effect of interactive football multimedia as a learning model during the Covid-19 pandemic. As we know, the learning process during a pandemic is an obstacle to students' understanding of soccer material. Due to these obstacles, it is necessary to innovate in the learning process by using interactive media to increase student understanding of the process. Along with previous research, there are findings in this study that explain the need for innovation in the learning process, which is useful for improving students' learning skills independently (Mujianto, 2015). During the Covid-19 epidemic, this study intends to create interactive football multimedia products for use in soccer classes. According to the findings, the three indicators of the media aspect, the material aspect, and the learning aspect as a whole remained in the "Good" category based on the phase I study experiment. While the findings of the phase II research trials of the same three indicators reflect the results of the phase II trials for the entire in the "Very Good" category, the product will be implemented and distributed later.

This development research produces a product, namely ARA MODEL aimed at teaching soccer material in online learning. The results of this study increase the knowledge of field practitioners and teachers about overcoming problems in learning during the Covid-19 pandemic. The use of interactive multimedia with the ARA MODEL is very helpful in learning. This is because the media is used as a learning support facility, because athletes can easily apply the material (Raybourn, 2014). In addition, teachers also have comprehensive knowledge and learning principles as the basis for teaching and learning (Taroreh, Satria, Indriani, & Maharani, 2022). In the future, combining theory with practice and prioritizing methods that are suitable for specific tasks (Wang & Liang, 2021). To demonstrate the effectiveness of the proposed method, we used the support vector machine method, or Kinect method (Shen, Zhang, & Cao, 2016). However, the use of media must also be in accordance with the learning material (Muslim, 2021).

The results of research conducted by (Wang & Liang, 2021) examine the integration and continuous development of various media and game methods in volleyball games. The results of this study indicate that the integration and continuous development of various media and game methods are driving the progress of volleyball today. In addition, another study with the title Effectivity of Physical Education Learning Using Audio-Visual Media During the COVID-19 Pandemic in Bangka Belitung (Lestari, Simbolon, Monica, Armanto, & Alfarras, 2021). The results of this study state that audio-visual media are effectively used in physical education learning. It can be seen when students are able to understand learning material, and students' learning outcomes have also increased. Meanwhile, research conducted face-to-face shows that the use of audio-visual media is very effective in improving learning outcomes (Anggraini, Rizhardi, & Suryani, 2022). This can be seen from the fact that the learning outcomes of students who were initially low can increase significantly.

A study revealed that the application of learning media through audiovisuals can improve economic learning outcomes (Rupawati, Noviani, & Nugroho, 2017). In addition, learning media in the form of films has an impact and can increase student learning results in moral creed classes (Khozain & Mumaisaroh, 2020). Then, research conducted related to the use of audio-visual media showed an increase in math learning outcomes during the Covid-19 Pandemic (Jusmiana, Herianto, & Awalia, 2020).

The results of these innovative findings are very good for the sustainability of education. This viewpoint is created since education is critical to the development of a wise and capable society (Sugiyadnya, Wiarta, & Putra, 2019). The role of teachers as educators in the success of their students

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is very large (Ginja & Chen, 2020; Hardinata et al., 2023; Hidayat & Kosasih, 2019; Samodra et al., 2023; Suryadi, Samodra, et al., 2023). Therefore, reforms during the learning process must continue to be carried out to improve the quality of education (Afni, Wahid, Hastati, Jumrah, & Mursidin, 2021). The effectiveness of a school education may be demonstrated in improvements in behavior, thinking, and movement abilities, which can be tracked through student learning outcomes (Kuncahyono, Suwandayani, & Muzakki, 2020; Mulia, Zakir, Rinjani, & Annisa, 2021). Updates to the current learning model are needed so that students can play an active role in the learning process (Kuncahyono et al., 2020).

To create a conducive and enjoyable learning atmosphere, teachers must develop their creativity (Pentury, 2017). By motivating and bringing out the creativity of students during the learning process by using several varied methods and strategies, such as group work, problem solving, and so on (Ucus, 2018). However, there are limitations in accessing the Internet, hardware, and software. As well as the amount of financing that is a barrier to maximizing online learning resources (Halim et al., 2021).

Learning with the right methods and media can certainly make the material presented easy for students to understand and practice directly. The teacher's ability to find the right method or methods for the material to be conveyed will greatly affect the learning objectives to be achieved as expected (Hutabri, 2019; Kasmawati, 2012). The role of the teacher as an educator contributes to students' activeness and willingness to work together during the learning process (Perdana, Supriatna, Yanti, & Suryadi, 2023)(Mashud, Arifin, et al., 2023)(Lynch, Kamovich, Longva, & Steinert, 2021). Therefore, a teacher is said to be successful in educating and implementing learning if there is a change in student behavior for the better (Bachtiar, Putri, & Maulana, 2021; Rahayu, 2020). Therefore, teachers should always be able to innovate in order to create learning that can develop children's talents so that they remain engaged and improve student learning outcomes.

Teaching is an effort to create an environmental system that teaches students so that teaching objectives can be achieved optimally (Oktaviani & Wulandari, 2019). Facilitate student learning and choose learning strategies that are in accordance with student characteristics (Fadhilah, 2021). In sports education, there are various methods or ways that can be used to achieve goals. The goals of teaching and education are to ensure that students can succeed in their learning tasks and that teachers can successfully teach and educate in accordance with the goals to be achieved (Dewi, 2020). Student learning achievement can be used as an assessment guideline for success in student learning activities (Anwar, Daud, Abubakar, Zainuddin, & Fonna, 2020). To create a conducive and enjoyable learning atmosphere, teachers must develop their creativity (Pentury, 2017). By motivating and bringing out the creativity of students during the learning process by using several varied methods and strategies, such as group work, problem solving, and so on (Ucus, 2018). However, there are limitations in accessing the Internet, hardware, and software. As well as the amount of financing that is a barrier to maximizing online learning resources (Halim et al., 2021).

Conclusions

The findings of the study and debate provide a solid foundation for the development of interactive multimedia in football classes. This is supported by references from earlier studies, which are given in the discussion of results and discussion. The findings of this study imply that developing learning innovations during the Covid-19 epidemic is critical. During a pandemic, one of them is employing interactive soccer multimedia as a learning paradigm. The results that have been obtained by using interactive multimedia football as a learning model during a pandemic can increase students' understanding of basic techniques in soccer games. Furthermore, the findings demonstrate that the product's efficacy and efficiency in learning during a pandemic are particularly suited for student understanding. The findings of this study expand field practitioners' and teachers' understanding of how to overcome learning challenges during the Covid-19 epidemic. Football interactive multimedia is disseminated and implemented by producing a product in the form of the ARA MODEL application, which can be accessed on the Google Play Store. Further research recommendations can implement interactive multimedia in the form of the ARA MODEL in soccer learning.

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Conflict of interests

There is no conflict of interest.

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