

## **Development of speed, agility, and quickness training model in soccer for learning to train age group based on an articulate storyline**

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### **Abstract**

This research aims to develop a training model for speed, agility, and quickness in the sport of soccer for children in the learning to train age group using the Articulate Storyline learning media. The subjects of this research are 15 students aged 9-12 from SSB Bina Sakti in Rembang Regency. The data collection method used is a questionnaire containing closed and open-ended questions. Quantitative analysis is used to analyze the data. The results of the validation recapitulation show that soccer coaching experts and soccer experts gave a validation score of 94.8%, while the media expert gave a score of 76.4%. Based on the validation results from experts and group testing, it can be concluded that the development model for speed, agility, and quickness training in soccer presented through the Articulate Storyline learning media is highly valid and suitable for use in SSB Bina Sakti in Rembang Regency.

**Keywords:** *Speed Agility Quickness, Learning to Train, Articulate Storyline*

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## **INTRODUCTION**

Sports is a physical training activity aimed at enhancing fundamental and sport-specific skills (Lynch, 2017). Bangun, (2014) Sport encompasses activities that hold significant importance in the lives of individuals, as it is an indispensable necessity intertwined with human existence. One of the most popular sports in the world is football. Football is more than simply a fun activity, it also helps players develop physically, socially, and mentally (Nunome et al., 2013). Football may serve as a successful business enterprise, a major source of employment possibilities, and a strategic tool for businesses and agencies looking to improve their public image through football (Yulianto, 2020). It's crucial to keep in mind that kids have a built-in vulnerability toward play, so giving them more opportunities to play games will probably make them happier and make them more interested in learning how to play football (Robert & Stephen, 2014).

The grassroots program is an effort implemented by FIFA, which is applicable to all of its member associations. The primary objective of the program is to provide youngsters with educational opportunities and foster their interest in football, while also promoting the cultivation of essential human values. Additionally, it will afford kids the chance to derive pleasure from participating in the game of football, with the objective of fostering global happiness among youngsters through this activity. During the early stages of development,

commonly referred to as the learning to train phase, it is crucial for a child to gain fundamental skills pertaining to proper technique, coordination, and speed (Nugraha et al., 2019).

Quickness, agility, and speed are all crucial in a game of football. Football players must be nimble on their feet, able to quickly shift courses and adapt to new situations. However, it is still a difficulty to design a model of speed, agility, and quickness training that is appropriate for the age of learning to train in the sport of football. For football players to continue to improve their speed, specific training to do so must be done. Football stands out from other sports thanks to its unique features, such as the importance of quick, fluid footwork (Fatchurahman et al., 2019).

According to a study conducted by (Polman et al., 2009), the implementation of speed, agility, and quickness training has been found to be efficacious in enhancing the responsiveness of football players to external stimuli, augmenting their acceleration capabilities, facilitating effective movement in various directions, and enabling rapid changes in direction or prompt cessation of movement. This feature enables players to engage in gameplay characterised by rapidity, effectiveness, seamlessness, and regularity. Nevertheless, there is a scarcity of specialised speed, agility, and quickness training models tailored to the developmental stage of athletes engaging in football training. Hence, it is imperative to undertake endeavours aimed at formulating a training model that aligns with the specific requirements and attributes of individuals within that age bracket.

Articulate Storyline emerged as a response to address the demand for enhanced interactivity and engagement in digital learning during the contemporary era (Priyambodo et al., 2012). This software capitalises on advancements in computer technology and the Internet to generate educational materials that incorporate multimedia components and interactive features. The emergence of articulate Storyline addresses the need for interactive learning media, the constraints of traditional learning methods, and the adaptability in instructional design. Through the utilisation of articulated stories, providers of learning content can construct learning experiences that effectively align with the expectations of the digital generation. This approach not only facilitates increased engagement and active involvement of learners, but also contributes to the enhancement of their comprehension and understanding (Darmawan, 2017).

The objective of this study is to construct a model for speed, agility, and quickness training specifically tailored for youngsters (ages 9-12) who are in the process of learning to train in the sport of football. The training model will be developed using Articulate Storyline, a platform for creating interactive e-learning content. The training model will incorporate the

principles of long-term athlete development, which underscore the significance of holistic athlete development over an extended period. This approach considers the many stages of growth that align with the athletes' age and degree of proficiency (Rianto, 2020).

In accordance with prior information, the researchers carried out a series of interviews with coaches and performed a requirements analysis for students of SSB Bina Sakti on July 19, 2023, within the premises of SSB Sakti Bina located in the Rembang area. According to the coach, the speed, agility, and quickness model implemented still lacks diversity and falls short in terms of its effectiveness. According to the coach, his training approach prioritised fundamental skills including as passing, dribbling, shooting, and ball control in every squad he instructed. Consequently, the physical aspects, which are typically considered significant at that developmental stage, were inadvertently neglected. There is a need to incorporate diverse modifications into the speed, agility, and quickness training paradigm to maintain student engagement and prevent boredom. By including game-like elements, students are more likely to remain motivated and comfortable during the training process, leading to increased satisfaction (Soemardiawan & Yundarwati, 2018).

The researchers conducted a needs analysis by administering surveys to a sample of 15 students from SSB Bina Sakti in the Rembang area, as part of their training sessions. The data gathered from the needs analysis of these lifts is shown in the subsequent table 1.

**Table 1.** Results of Analysis of SSB Needs in Sakti District of Rembang

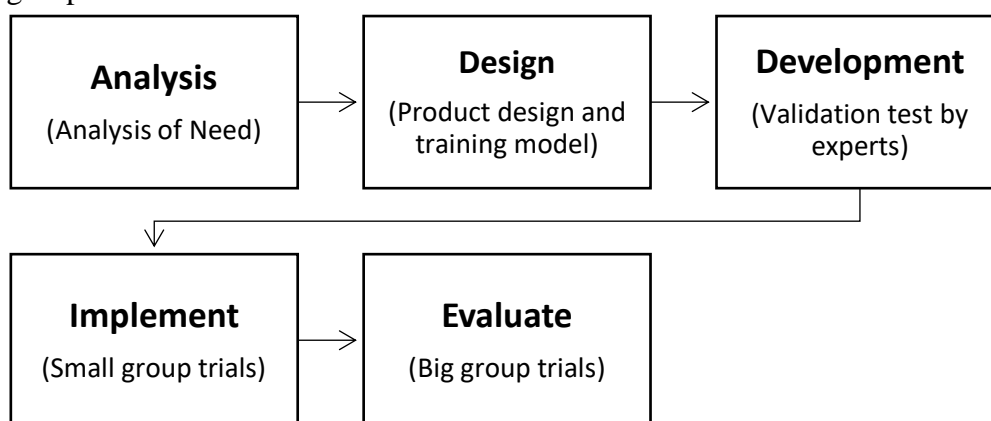
Number	Question	Answer Percentage (%)	
		Yes	No
1	Have you ever done speed agility quickness before?	100%	0%
2	Have you ever felt full while doing speed agility quickness exercises?	80%	20%
3	Have you ever had trouble doing speed agility quickness?	80%	20%
4	Do you know the model of speed agility quickness at the age of 9-12?	100%	0%
5	Do you need models of varied speed agility quickness exercises to improve speed, agility, and reaction speed so you don't get bored?	100%	0%
6	Do you think the speed agility quickness exercises given by the coach have varied?	33%	67%
7	Does the SSB Bina Sakti district Rembang need media to help in guiding speed agility quickness exercises?	100%	0%
8	Given the current era in the era of digital development, researchers want to create learning media articulate the appropriate storyline to help guide your speed agility quickness practice, do you agree?	100%	0%

Number	Question	Answer Percentage (%)	
		Yes	No
9	Did you at school ever learn what it is articulate storyline?	0%	100%
10	Did you outside school ever know what it is to articulate the storyline and its purpose for learning methods?	0%	100%

The results of the needs analysis indicated that all students at SSB Bina Sakti reported engaging in speed, agility, and quickness activities. Additionally, nearly all students expressed feelings of saturation and encountered challenges while performing these exercises. There is a need for a modified version of the speed, agility, and quickness training paradigm, as the current variations provided by coaches are insufficient. Additionally, the participants expressed their agreement with the researchers' utilization of an interactive learning medium, specifically Articulate Storyline, which effectively facilitated their implementation of speed, agility, and quickness activities. The reason for this is that they did not receive instruction or engage in independent learning regarding the effective expression of narrative content.

**METHOD**

To design the product speed, agility, and quickness training model for children aged 9 to 12 years, this training model will be based on football criteria, taking into consideration aspects such as age-appropriate game, time, and distance. This model's development followed the ADDIE development model (Sugiyono, 2019). The development procedure consists of the following steps:



Picture 1. Research and Development Procedure Schedule

This study's data comprises of quantitative information. Quantitative analysis techniques are used to calculate percentages for the purpose of analysing the distribution of the lift. The tracks were filled at the requirements analysis stage, evaluated by training experts, media, and football, as well as tested with small groups and large groups. In order to make conclusions

about the analysis of the percentage of efficiency, effectiveness, and viability of the product easy, the researchers used product quality criteria based (Arikunto, 2010), the criteria of product quality used are as follows:

Tabel 2. Classification of Product Quality Criteria

Categories	Percentage	Details	Meaning
A	81%-100%	Very good	Used
B	61%-80%	Good	Used
C	41%-60%	Enough	Used with revision
D	21%-40%	Less	Not used
E	<21%	Very Less	Not Used

## RESULTS AND DISCUSSION

The research findings were acquired by employing trailers that were disseminated at several stages of the project, including the needs analysis phase, expert validation, small group trials, and large group trials. The data obtained from the different stages of the study are afterward presented in table format.

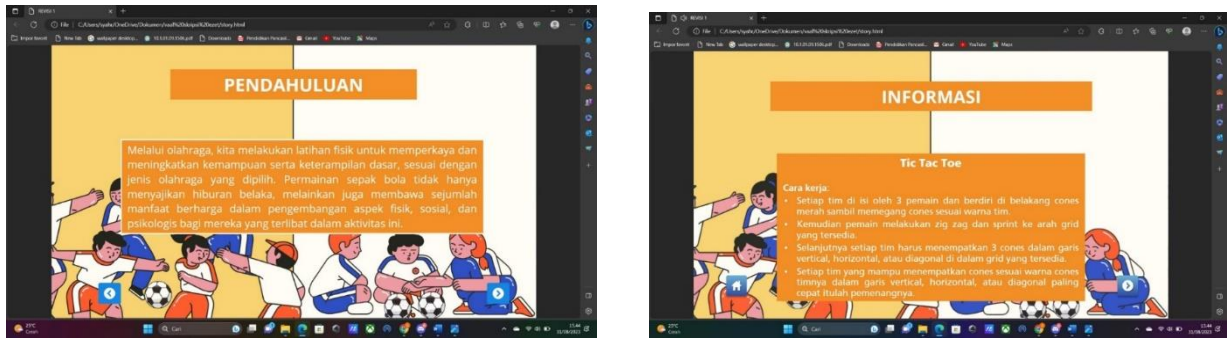
### *Product Development Specifications*

This study will show six training models, including speed, agility, and quickness, that have been designed for the purpose of training. The proposed training model will utilise a game format that is both enjoyable and comprehensible for the students of SSB Bina Sakti. This approach aims to enhance the students' speed, agility, and quickness, without compromising the primary objective of the training, which is to improve their overall speed, flexibility, and reaction time. The researchers have designed an exercise model that aligns with the features of children aged 9-12 years. This model involves low volume and intensity of exercise, which is incorporated into a game-like format. The researchers will utilise cones as their tools.

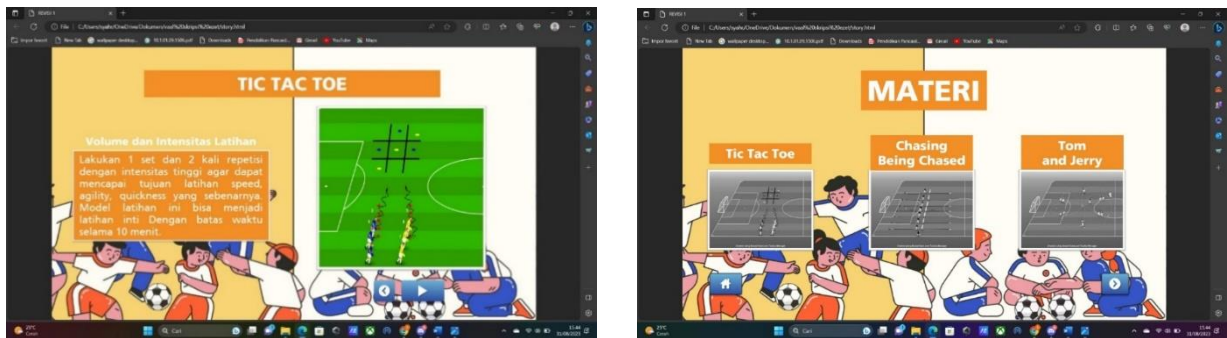


Picture 2. Initial display

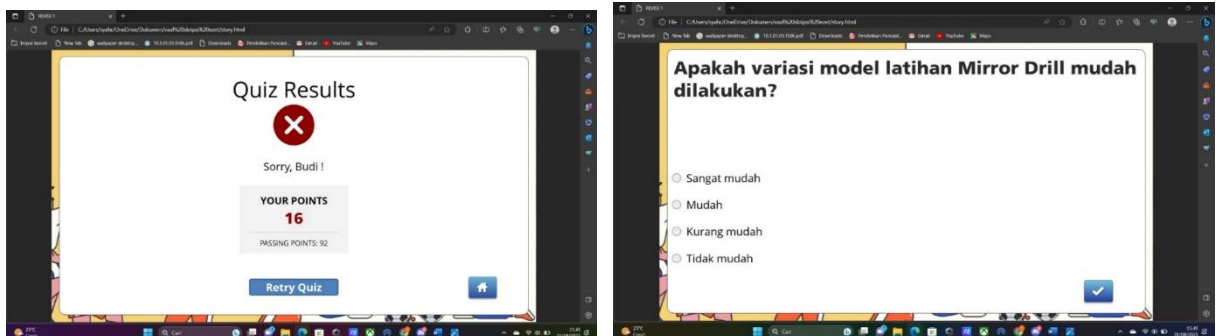
In the first slide the researcher will display a research title and then there will be a further button to go to the second slide. In the second one will be the login view for the students who will access the articulate storyline. After the student has successfully logged in then will go directly to the scene home. in the home scene researchers will show a menu that contains the introductory scene, information, material, and evaluation. In home scene students will have free access to the menu that has already been displayed.



Picture 3. Introduction and Information Scene



Picture 4. Scene Material



Picture 5. Scene Results

The preliminary scene will contain the background of why the researchers want to develop the training model speed, agility, and quickness. Whereas in the scene information researchers will create a coaching point, which is, why the practice model developed by researchers is very influential with speed, Agility, Quickness. The last one on the evaluation scene will give the researchers a double-choice question as a test of students' knowledge of speed, agility, and quickness. On each scene and slide the researchers will add an audio and animation that will help the students to make it easier and more enjoyable when accessing the articulate storyline that the scientists have designed.

#### *Presentation of Validation Test Data for Football Coaches and Football Members*

The model of speed, agility, and quickness training that has been planned and developed has been evaluated and evaluated by a football trainer who has football expertise and has a

national level D training license and a footballer who is a lecturer who hosts football sports courses. Below are the evaluation data from football trainees and football experts.

**Table 3.** Questionnaire results for football trainees and football experts

No.	Variable	AKS	AS	Maximum Score	Average
1	Interesting	23	23	24	93,2%
2	Convenience	23	21	24	
3	Compatibility	22	22	24	
4	Efficient	23	23	24	

From the results of the evaluation listed in table 3.2 using the instruments given to football trainees and football experts, the average (93.2%) stated with great confidence that the training model developed by the researchers was suitable and worthy of testing, with the advice and input of football experts is that there is no intensity, volume, as well as interval training model to be developed.

*Presentation of Media Expert Review Data*

This product has been evaluated and evaluated by media experts using the lift given by the researchers. Below is a media expert test data with suggestions for improving the product.

**Tabel 4.** Data from media expert questionnaires

No.	Sub Variable	Score	Maximum	%	Average
1	Attractiveness	18	24	75%	76,4%
2	Clarity	18	24	75%	
3	Ease of use	19	24	79,1%	

Based on the evaluation results that have been analysed, it can be concluded that this product acquires validity and matching of (76.4%) with good category. With advice and input from media experts about background design and adding voices to the training model menu. Referring to the data, it can be concluded that the product media articulate storyline can be published and given to students SSB Bina Sakti District Rembang.

Presentation of Small Group Testing Data In this phase is done to students SSB Bina Sakti district Rembang with a total of 5 (five) students who are aged 9-12 years. The assessed aspects relating to this product are: (1) ease, (2) efficiency, (3) usefulness, (4) effectiveness.

**Table 5.** Results of Small Group Trials

No.	Exercise Model	Component			
		Conveniecne	Interesting	Compability	Efficient
1	Tic Tac Toe	17	19	20	19
2	Chasing Being Chased	20	20	20	20
3	Tom and Jerry	15	18	20	19
4	Wake Up Get the Ball	20	20	20	20
5	Mirorr Drill	18	20	20	18
6	Catch Me	20	20	20	20

No.	Exercise Model	Component			
		Conveniecne	Interesting	Compability	Efficient
	Score	110	117	120	116
	Maximum Score	120	120	120	120
	Percentage	92%	97,5%	100%	97%
	Average	96,5%			

5 students of SSB Bina Sakti district Rembang stated that the product of the training model for speed, agility, quickness to improve agility and speed, and reaction is easy to understand, interesting, and effective in the training, based on the average of the presented data (96.5%). Based on this conclusion, the model of training speed, Agility, and Quickness that exists in the learning media articulate storyline can be used as part of the development of training to enhance the speed, flexibility, and reaction time of 9–12-year-old students in the SSB Rembang district.

### Results of Large Group Trials

In this phase is done to students of SSB Bina Sakti district Rembang with a total of 15 (fifteen) students aged 9-12 years. The assessed aspects relating to this product are: (1) ease, (2) efficiency, (3) usefulness, (4) effectiveness.

**Table 6.** Large Group Test Results

No.	Training Model	Component			
		Convenience	Attractiveness	Usefulness	Effectiveness
1	Tic Tac Toe	46	52	58	50
2	Chasing Being Chased	57	56	59	55
3	Tom and Jerry	45	54	57	56
4	Wake Up Get the Ball	60	58	58	56
5	Mirorr Drill	50	53	55	52
6	Catch Me	56	59	58	57
	Score	314	332	345	326
	Maximum Score	360	360	360	360
	Percentage	87%	92%	96%	90,5%
	Average	91,4%			

Based on the data recapitulated with an average (91.4%), it can be concluded that the students of SSB Bina Sakti district Rembang stated that the product of the training model speed, agility, quickness to improve agility, speed, and reaction is easily understood, interesting, and effective in the training. Therefore, the model of training speed, Agility, Quickness that exists in the learning media articulate storyline can be used as part of the development of training to improve the speed, flexibility, and response of students of Sakti SSB district of Rembang aged 9-12 years.



Each sport's playing techniques will continue to evolve in tandem with technological advancements and game regulations whose quality requirements are rising (Budiwanto et al., 2016). Development of speed, agility, and acceleration learning-to-train models SSB Bina Sakti age 9 children -12 years is packaged as an articulate storyline interactive learning media containing multiple materials and forms of development training in the form of images and audio-visuals that make it easier to learn the speed, agility, and quickness training model itself. Amiroh (2019), this programme enables users to combine diverse categories of content, including images, text, sound, graphics, video, and animation, when creating educational materials. The use of interactive learning media in the training process is extremely beneficial for enhancing the skills and knowledge of students. Several factors must be considered when producing media, including the story view design, which is intended to be straightforward and easy to comprehend.

Setyaningsih et al., (2020) articulate storyline can also serve as a beneficial presentation and communication software. This demonstrates that this programme is highly adaptable to a variety of visual communication requirements. Thus, Articulate Storyline belongs to the category of multimedia creation tools used to develop interactive learning content (Arrozi et al., 2021) demonstrates that the use of Articulate Storyline 3 software significantly enhances the learning process for sports activities. This is based on evidence demonstrating improvements in various facets of learning, including emotions (affective), cognition (cognitive), and psychomotor.

SSB Bina Sakti students aged 9-12 years still have difficulties in the variation model of speed, agility, quickness. This can be known based on the results of an interview with SSB coach Bina sakti aged 9- 12 years who stated that he rarely provides physical training material to the children of that age because according to him at the age of 9-12 should have a good foundation of basic techniques to support the personal expertise of each student in football sports (Agus, 2008). In the end, the coach forgets the component of physical training which is also an important component in that age. In the sport of football, the very important physical components athletes have are speed, agility, and reaction. Polman et al., (2009), speed, agility, and quickness training is considered effective in improving football players' ability to respond to stimuli, increase acceleration, move effectively in different directions, and be able to change direction or stop quickly.

Santika (2015) in sports science, especially in the context of the biomotor aspect, there are ten major physical components that play a role in supporting athlete's skills and performance. These four major physical components include endurance, speed, strength, and

flexibility. Meanwhile, the other six biomotor components such as reaction, power, coordination, accuracy, balance, and agility are the result of the combination or interaction of the main physical component. In other words, these biomorphic components are a blend or expression of the strengths, speeds, determinations, and endurance that contribute to the ability and performance of athletes (Amar et al., 2017).

Based on research conducted by (Ratamess, 2011), it was found that athletes who have explosive acceleration abilities have competitive advantages in a variety of sports such as football, basketball, and baseball. The peak of the acceleration ability is usually seen within the first 8-10 steps, where athletes can reach about 75% of their maximum speed within that time period. It's perfectly suited to the nine to twelve-year-olds in the learning to train phase. A football sport requires running short distances at high speeds due to the size of a football field and the number of football players that keep players running only at a distance of about 10-15 meters (Hazbeehan et al., 2022).

From the evaluation by the experts, it has been shown that the model of training that has been developed must have some important characteristics, namely (1) high attractiveness, (2) clarity, and (3) ease of understanding, (4) and have effectiveness. The purpose of these features is to ensure the smooth execution of the exercise. This training model is expected to be tailored to the needs of students and trainers so that they can participate actively and effectively in the process. In addition, it is expected that this training model will help students in performing the exercise more easily and optimally (Probowo, 2020).

Ateng (2002) product training model speed, agility, and rapidity have a number of important benefits. First, using learning media to articulate the narrative in a straightforward and interactive manner, making it simple for students and instructors to comprehend. In addition, the product comes with six training models that concentrate on speed, agility, quickness and have been designed with the use of equipment like cones. Also advantageous is the adaptability of the training to the requirements of the trainer. However, this product has a few flaws that should be considered. One of them is a media display that cannot be set to full-screen mode when accessed via a smartphone, unlike a laptop or tablet display. The next flaw is at the stage of implementation, where the trainer rarely has tablets or other devices, making it irrelevant for the learning media to articulate the storyline when training is being conducted. According to media researchers, it is preferable to evaluate the athletes' performance using the storyline after they have completed their training. Coach can create a WhatsApp group and send the group a URL to publish an articulate storyline.

To improve this product, researchers are encouraged to take a number of development measures. First, modifying the training model to be more varied and engaging will increase the participants' motivation to practice. Second, the need to improve the design of the narrative view to make it more creative and engaging, so that it can be more easily comprehended and encourage students to learn. By addressing these shortcomings and implementing the proposed development measures, it is anticipated that the final product of this training model will better support the learning and training process for students and instructors.

## **CONCLUSION**

Based on the analysis of research data, the present research and development endeavour has effectively generated a training model product that focuses on enhancing speed, agility, and quickness, with a specific emphasis on the age group associated with the learning-to-train phase. The design of this product takes the form of educational media utilizing the articulate storyline platform. This educational platform provides users with the convenience of unrestricted access, allowing them to utilize it at their own discretion, regardless of time or location. The findings of this study have undergone validation by a diverse group of professionals, encompassing football trainees, media specialists, and football authorities. In addition to this, the product has undergone testing with both small and large cohorts, yielding results that indicate the product's compliance with the necessary requirements of validity.

## **REFERENCES**

- Agus, S. (2008). Buku pintar sepakbola. *Buku Pintar Sepakbola*, 10.
- Amar, I. Y., Subarkah, A., & Wardoyo, H. (2017). Pengaruh Latihan Saq (Speed, Agility, Quickness) Terhadap Peningkatan Kelincahan Atlet Bulutangkis Kelompok Umur Ganda Remaja Puteri Pb. Djarum. In *Jurnal Ilmiah Sport Coaching and Education* (Vol. 1, Issue 1). <https://doi.org/10.21009/jsce.01105>
- Amiroh. (2019). *Mahir Membuat Media Interaktif Articulate storyline*.
- Arrozi, D. B., Wahyudi, A. N., & Prayoga, A. S. (2021). Penerapan Model Pembelajaran Media Interaktif Menggunakan Software Articulate Storyline 3 pada Pembelajaran Lompat Jauh Siswa Kelas V. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 13(1), 44–50. <https://doi.org/10.37640/jip.v13i1.954>
- Ateng, K. A. (2002). *Asas dan Landasan Pendidikan Jasmani*. 1–13. <https://lib.unnes.ac.id/18919/>
- Bangun, S. Y. (2014). The role of recreational sport toward the development of sport tourism in indonesia in increasing the nations quality of life. *Asian Social Science*, 10(5), 98–103. <https://doi.org/10.5539/ass.v10n5p98>
- Budiwanto, S., Rahayuni, K., & Sulistyorini. (2016). Peningkatan Keterampilan Teknik Dasar Pukulan Forehand Overhead Stroke Menggunakan Metode Latihan Berulang (Drilling) Umpan Lempar. *Jurnal Motion*, VII(1), 107–118. <https://doi.org/10.33558/motion.v7i1.501>

- Darmawan, I. (2017). Upaya Meningkatkan Kebugaran Jasmani Siswa Melalui Penjas. *Jip*, 7(2), 143–154. <http://ejournal.unikama.ac.id/index.php/jrnspirasi>
- Fatchurahman, R., Sundari, L. P. R., Griadhi, I. P. A., Tirtayasa, K., Dinata, I. M. K., & Dwi Primayanti, I. D. A. I. (2019). Pelatihan Zig-Zag Run Dribbling Dan Pelatihan Shuttle Run Dribbling Sama Baik Dalam Meningkatkan Kecepatan Menggiring Bola Futsal Sma Dwijendra Denpasar. *Sport and Fitness Journal*. <https://doi.org/10.24843/spj.2019.v07.i03.p07>
- Hazbeehan, M., Yunus, M., & Taufik, T. (2022). Development of Strenght Training Models for Soccer Players Age 12-16 on Arema Indonesia. *Proceedings of the 3rd International Scientific Meeting on Public Health and Sports (ISMOPHS 2021)*, 44. <https://doi.org/10.2991/ahsr.k.220108.031>
- Lynch, T. (2017). How does a physical education teacher become a health and physical education teacher? *Sport, Education and Society*, 22(3), 355–376. <https://doi.org/10.1080/13573322.2015.1030383>
- Nugraha, A., Sukoco, P., & Annisa, A. (2019). Motivation and Physical Education Learning Achievement among Students with Hearing Impairment. *Acta Facultatis Educationis Physicae Universitatis Comenianae*, 59(2), 129–137. <https://doi.org/10.2478/afepuc-2019-0011>
- Nunome, H., Drust, B., & Dawson, B. (2013). Science and football VII: The proceedings of the seventh world congress on science and football. *Science and Football VII: The Proceedings of the Seventh World Congress on Science and Football*, 1–432. <https://doi.org/10.4324/9780203131879>
- Polman, R., Bloomfield, J., & Edwards, A. (2009). Effects of SAQ training and small-sided games on neuromuscular functioning in untrained subjects. *International Journal of Sports Physiology and Performance*, 4(4), 494–505. <https://doi.org/10.1123/ijsp.4.4.494>
- Priyambodo, E., Wiyarsi, A., Lis, D. R., & Sari, P. (2012). Pengaruh Media Pembelajaran Interaktif Berbasis Web terhadap Motivasi Belajar Mahasiswa. *Jurnal Kependidikan*, 42(2), 99–109.
- Probowo. (2020). Sepak Bola Nasional. In *Indosport.com*. Universitas Negeri Malang. <https://doi.org/10.31219/osf.io/9a5mh>
- Ratamess, N. (2011). ACSM's foundations of strength training and conditioning. In *ACSM's Foundations of Strength Training and Conditioning*. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84973421526&partnerID=40&md5=7337c3fb49015c0ac454b2946560b29c>
- Rianto, R. (2020). Pembelajaran Interaktif Berbasis Articulate Storyline 3. *Indonesian Language Education and Literature*, 6(1), 84. <https://doi.org/10.24235/ileal.v6i1.7225>
- Robert, J., & Stephen, S. (2014). *Effect of Supervised Learning and Self Learning on Passing Skills in*. 2(10), 33–36.
- Santika, I. G. P. N. A. (2015). Tingkat Kelincahan Calon Mahasiswa Baru Putra Fakultas Pendidikan Olahraga dan Kesehatan IKIP PGRI Bali Tahun 2015. *Jurnal Pendidikan Kesehatan Rekreasi*, 2, 2–10.
- Setyaningsih, S., Rusijono, R., & Wahyudi, A. (2020). Pengaruh Penggunaan Media Pembelajaran Interaktif Berbasis Articulate Storyline Terhadap Motivasi Belajar dan Hasil Belajar Siswa Pada Materi Kerajaan Hindu Budha di Indonesia. *Didaktis: Jurnal*

*Pendidikan Dan Ilmu Pengetahuan*, 20(2). <https://doi.org/10.30651/didaktis.v20i2.4772>

- Soemardiawan, & Yundarwati, S. (2018). Pengembangan Model Latihan SAQ (Speed, Agility, Quickness) terhadap peningkatan kecepatan dan kelincahan pada pemain futsal FIM Squad IKIP Mataram TAHUN 2018, Program Studi Pendidikan Olahraga dan Kesehatan, FPOK, IKIP Mataram. *Jurnal Ilmiah IKIP Mataram*, 5(1), 32–40. <https://ojs.ikipmataram.ac.id/index.php/jiim/article/view/1121>
- Sugiyono, P. D. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Yulianto, W. W. E. (2020). Identifikasi keberbakatan sepak bola pada siswa sekolah sepak bola hizbul wathan yogyakarta. *Journal Of Sport Education (JOPE)*, 2(2), 47. <https://doi.org/10.31258/jope.2.2.47-54>