



FAKULTAS ILMU PENDIDIKAN



E-ISSN: 2722-3450

P-ISSN: 2772-3808

VOL. 3 No. 2 (NOV 2022)



JCES

Journal Coaching Education Sports



APPKOI
ASOSIASI PROGRAM STUDI
PENDIDIKAN KEPELATIHAN OLAHRAGA
INDONESIA

**Program Studi Pendidikan Keahlian Olahraga
Fakultas Ilmu Pendidikan**

Universitas Bhayangkara Jakarta Raya

Table of Contents

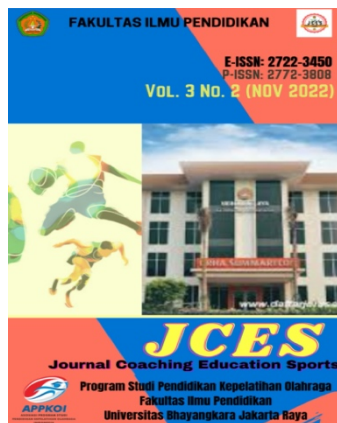
Journal Coaching Education Sport

Vol. 3 No. 2 Nov 2022 | E-ISSN 2722-3450 (Online) P-ISSN 2775-3808 (Cetak)

This volume has 10 articles consisting of 25 authors and various universities, namely: Universitas Negeri Medan, Universitas Islam Riau, Universitas Sains Cut Nyak Dien, Universitas Triatma Mulya, Universitas Tadulako. And Universitas Negeri Malang.

Title	: Educational Leadership in the Digital Age Leadership Education in the Digital Age
Author	: Rini Andriani, Hasyim, Rahma Dewi, Afri Tantri, Nurkadri
DOI	: https://doi.org/10.31599/jces.v3i2.1154
Title	: UNIMED Tennis Court Community Forehand Drive Overview
Author	: Gulasa Octo Gilbert Sihombing
DOI	: https://doi.org/10.31599/jces.v3i2.1158
Title	: Volleyball Smash Ability Level of the Athletes of the Medan Women's Club Volleyball
Author	: Andi Nata Purba
DOI	: https://doi.org/10.31599/jces.v3i2.1202
Title	: The Effect Of Variations In Extensive Interval Training On Aerobic Endurance Fighter Muaythai Fightculture Medan
Author	: Verianto Tumangger, David Siahaan
DOI	: https://doi.org/10.31599/jces.v3i2.1505
Title	: Efforts to Improve Student Learning Outcomes Sprint Running Through Traditional Games (Gobak Sodor)
Author	: Aprillia Maharani Putri, Leni Apriani
DOI	: https://doi.org/10.31599/jces.v3i2.1511
Title	: Preservation of Traditional Sports of Geudeu-Geudeu Wrestling With Modification of Match Rules in the Pidie Jaya Community of Aceh
Author	: Edi Safwan, Naimatul Jamaliah, Zulfikri
DOI	: https://doi.org/10.31599/jces.v3i2.1535
Title	: The Effect of Push Up and Pull Up Exercises on Shooting Free Throw Results in Basketball Athletes in Jembrana Regency
Author	: Arya Tangkas Prasetya, Ketut Addy Indrawan, Ni Gusti Ayu Lia Rusmayani
DOI	: https://doi.org/10.31599/jces.v3i2.1548
Title	: The Effect of Jigsaw Cooperative Learning Model on Learning Outcomes of Dribbling and Passing Using the Back of the Foot Football Game in Class VII Students of SMP
Author	: Ni Putu Anggreni, I Wayan Repiyasa, Komang Ayu Krisna Dewi
DOI	: https://doi.org/10.31599/jces.v3i2.1549
Title	: The Effectiveness of Corner Online Learning During a Pandemic
Author	: Sardiman, Didik Purwanto
DOI	: https://doi.org/10.31599/jces.v3i2.1571
Title	: Development Of Floor Gymnastic Learning Device Based On Articulate Storyline Application
Author	: Sigit Wahyudin, Lokananta Teguh Hari Wiguno, Ari Wibowo Kurniawan
DOI	: https://doi.org/10.31599/jces.v3i2.1611

E-ISSN : 2722-3450
P-ISSN : 2775-3808
Volume 3 Nomor 2 (2022)
November 2020



Redaksi menerima artikel yang belum pernah dimuat di media lain. Ditulis oleh dosen maupun penulis lain, baik dari dalam maupun luar Universitas Bhayangkara Jakarta Raya. Redaksi tidak bertanggung jawab atas semua konten isi dalam artikel terkait isu copyrights, plagiarism, dan lain-lain. Penulis bertanggung jawab penuh atas konten isi

DARI REDAKSI

Assalamu'alaikum Warahmatullahi Wabarokatuh

Alhamdulillahirobbiláalamiin...

Jurnal Education Coaching Sports Volume 3 Nomor 2 Bulan November Tahun 2022 akan terbit. Jurnal Education Coaching Sports (JCES) yang menyajikan hasil karya ilmiah baik secara teori dan empiris dari berbagai bidang ilmu yang mendukung pembangunan pendidikan keolahragaan Indonesia.

Penerbitan jurnal ini tentu tidak lepas dari kelemahan dan kekurangan, oleh karena itu Dewan Redaksi dengan senang hati menerima masukan, kritik, dan saran yang membangun demi kebaikan jurnal ini di edisi yang akan datang. Dewan Redaksi menerima kiriman naskah dari pembaca melalui proses review oleh penyunting ahli. Jika telah memenuhi syarat maka naskah akan diterbitkan. Akhir kata, Dewan Redaksi mengucapkan selamat membaca dan besar harapan kami terbitan ini dapat berguna bagi pembaca sekalian.

Wassalamu'alaikum Warahmatullahi Wabarokatuh

Penerbit:

Pendidikan Kepelatihan Olahraga FIP UBJ

Sekretariat:

Pendidikan Kepelatihan Olahraga FIP UBJ

Jl. Perjuangan No. 81, Marga Mulya, Bekasi Utara
Bekasi Jawa Barat 17143 Telp/Fax: (021)
88955882 e-mail: Jcesports@ubharajaya.ac.id
<http://ejurnal.ubharajaya.ac.id/index.php/JCESPO>
[RTS/index](http://ejurnal.ubharajaya.ac.id/index.php/JCESPO)

EDITORIAL TEAM

E-ISSN : 2722-3450
P-ISSN : 2775-3808
Volume 3 Nomor 2 (2022)
November 2022



Nama	Jabatan	Afiliasi
Dr. Ahmad Muchlisin Natas Pasaribu, S.Pd, M.Pd.	Editor in Chief	Universitas Bhayangkara Jakarta Raya, Indonesia
Prof. Dr. M.E. Winarno, M.Pd	Managing Editor	Universitas Negeri Malang, Indonesia
Hendra Mashruri	Editorial Board Member	Universitas Pendidikan Ganesha, Indonesia
Imam Marsudi	Editorial Board Member	Universitas Negeri Surabaya, Indonesia
Anak Agung Putra Laksana	Editorial Board Member	Universitas PGRI Mahadewa Bali, Indonesia
Palmizal	Editorial Board Member	Universitas Jambi, Indonesia
Sahabuddin	Editorial Board Member	Universitas Negeri Makassar, Indonesia
Nurkadri	Editorial Board Member	Universitas Negeri Medan, Indonesia
Dian Pujiyanto	Editorial Board Member	Universitas Bengkulu, Indonesia
Budiman Agung Pratama	Editorial Board Member	Universitas PGRI Kediri, Indonesia
Febi Kurniawan	Editorial Board Member	Universitas Singaperbangsa Karawang, Indonesia
Herri Yusfi	Editorial Board Member	Universitas Sriwijaya, Indonesia
Arief Dermawan	Editorial Board Member	Universitas Negeri Malang, Indonesia
Bayu Hardiyono	Editorial Board Member	Universitas Bina Darma, Indonesia
Toktong Parulian	Editorial Board Member	Universitas Islam Riau, Indonesia
Leni Apriani	Editorial Board Member	Universitas Islam Riau, Indonesia
Ari Wibowo Kurniawan	Editorial Board Member	Universitas Negeri Malang, Indonesia
Gumarpi Rahis Pasaribu	Technical Editor (Translator)	Universitas Islam Negeri Medan, Indonesia
Juli Candra	Technical Editor (Layout)	Universitas Bhayangkara Jakarta Raya, Indonesia
Tomy Rizki Prasetyo	Technical Editor (Production)	Universitas Primagraha, Indonesia

REVIEWER TEAM

E-ISSN : 2722-3450
P-ISSN : 2775-3808
Volume 3 Nomor 2 (2022)
November 2022



Berikut ini adalah mitra bestari/reviewer Journal Coaching Education Sports UBJ:

Nama	Afiliasi
Mohd. Izwan Shahril	Universitas Pendidikan Sultan Idris, Malaysia
Ramdan Pelana	Universitas Negeri Jakarta, Indonesia
Syahrudin	Universitas Negeri Makassar, Indonesia
Nur Azis Rohmansyah	Universitas PGRI Semarang, Indonesia
Ika Novitaria marani	Universitas Negeri Jakarta, Indonesia
Yulingga Nanda Hanief	Universitas PGRI Kediri, Indonesia
Agus Rusdiana	Universitas Pendidikan Indonesia, Indonesia
Benny Badaru	Universitas Negeri Makassar, Indonesia
Sandey Tantra Paramitha	Universitas Pendidikan Indonesia, Indonesia
Silvy Juditya	Universitas Pasundan Cimahi, Indonesia
Albadi Sinulingga	Universitas Negeri Medan, Indonesia
Aridhotul Haqiyah	Universitas Islam 45 Bekasi, Indonesia
Herli Pardilla	Universitas Pahlawan Tuanku Tambusai, Indonesia
Jufrianis	Universitas Pahlawan Tuanku Tambusai, Indonesia
Muhammad Salahuddin	Universitas Muhammadiyah Luwuk, Indonesia
Muhammad Iqbal	STKIP Kusuma Negara, Indonesia
Novri Gozali	Universitas Islam Riau, Indonesia
Komaruddin	Universitas Pendidikan Indonesia, Indonesia
Raffly Henjilito	Universitas Islam Riau, Indonesia
Fadillah Umar	Universitas Sebelas Maret, Indonesia
Boy Indrayana	Universitas Jambi, Indonesia
Albadi Sinulingga	Universitas Negeri Medan, Indonesia
Romi Cendra	Universitas Islam Riau, Indonesia
Zainur	Universitas Islam Riau, Indonesia
Surya Rezeki Sitompul	Universitas Primagraha, Indonesia



Leadership Education in the Digital Age

Rini Andriani^{*1a,b,c,d,e}, **Hasyim**^{2a,b,c,d}, **Rahma Dewi**^{b,d,e}, **Afri Tantri**^{b,c,d}, **Nurkadri**^{c,d,e}
SMK N 10 Medan, Jln. Teuku Cik Ditiro no. 57, Medan Sumatera Utara 20152 Indonesia
Universitas Negeri Medan Jln. Willem Iskandar, Medan Sumatera Utara 20221 Indonesia
e-mail: riniandriani0179@gmail.com¹, hasyimesty@unimed.ac.id², rahmadewi@unimed.ac.id,
nurkadri@unimed.ac.id

Abstract

Leaders or leaders of an educational institution as people who are used to deciding what is right or most appropriate in certain situations, especially in the education policy itself. Of course, in the current era of the Industrial Revolution 4.0, policy is all about elements and values. The match is in the section itself. From individuals to world interests, their infrastructure must be properly managed. Education is actually a means to advance human civilization, plays an open role in this Industrial Revolution era, and must comply with aims and objectives without being constrained by regional interests. To prevent this very rapid development from being hampered or misdirected, we really need a very optimal role. New education policies need to be developed easily and quickly, but still put humanity first. This is of course the realm of education.

Keywords: Leadership, Education, Industrial Revolution, Digital Age

corresponding author: riniandriani0179@gmail.com

Artikel Info:

Submitted: 13/05/2022

Revised: 01/07/2022

Accepted: 29/11/2022

Published: 30/11/2022

How to Cite: Andriani, R., Hasyim., Dewi, R., Tantri, A., Nurkadri (2022). Leadership Education In The Digital Age. *Journal Coaching Education Sports*. 2(2). 1-8. <https://doi.org/10.31599/jces.v3i2.1154>

Author's Contribution: a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

Leadership is the ability to influence people to achieve organizational goals (Diana Darmawati et al., 2017). A leader must have a visionary soul, full of passion, creative, flexible, full of inspiration, innovative, brave, imaginative, like to try, spark change, and have personal power (Fadhli, 2017).

In addition to the above leadership characteristics consist of several special personal characteristics, such as intelligence, values and appearance (Cahyati et al., 2020). Where are the physical characteristics such as energy in the personality of having full confidence in the leader (Sinulingga & Pertiwi, 2019). Leadership involves the process of influencing goal setting for an organization, motivating followers to achieve goals, and influencing groups and their culture (Novian et al., 2020). Leadership is a formal position that requires facilities and services from members to be served (Nasution, 2016).

Leadership consists of both authoritarian and democratic leaders, who tend to centralize authority and rely on legitimate and beneficial coercion to govern their subordinates (Hogan & Sherman, 2020). Democratic leaders, on the other hand, are leaders who delegate authority to others, promote certainty, and rely on strength and professional references to governing their

subordinates (Phaneuf et al., 2016)..

In various kinds of literature, leadership can be studied from three angles: (1) Characteristic approach or characteristic approach, or unique characteristics. (2) The style or action approach in reading or the style approach. (3) Approach to unforeseen circumstances (Bertrand & Rodela, 2018). In subsequent developments, research has focused more on how to become an effective leader, including developing awareness of mental abilities to become a professional and moral leader (Wibowo, 2011).

B. Method

The author in this study uses library research, where the author focuses more on issues that are currently developing around Educational Leadership in the Digital Era, by reviewing sociological and political approaches. In the data collection technique, the author uses identifying a discourse from books, articles, magazines, journals, or obtaining information from others to find things in the form of notes, books, transcripts, and so on related to educational leadership in the digital era.

As for the author in collecting data using methods of reviewing a document: First, the writer conducts an appropriate study such as literature with material to be examined, Second the author after obtaining the data that has been collected

then the data will be analyzed through descriptive method data according to what the author understands.

C. Result and Discussion

a. School leadership

In education, leaders are needed to provide direction so that education runs well and smoothly. Education should be lived like an organization where the leader becomes the commander in directing how education should be carried out.

Leadership must understand how the leader is, starting from what is meant by a leader, goals, how the leader works, the rights of the dreamer (Wahyudin et al., 2018). We must know this. Not only for prospective leaders but also members, prospective leaders to real leaders (Junita, 2020).

Educational leadership is the ability to drive the implementation of education, so that the educational goals that have been set can be achieved effectively and efficiently (Herliana, 2017). Educational leadership is the ability to influence and move others to achieve educational goals freely and voluntarily (Gea et al., 2019). The principal of the school is the head of education. In his position as the official head of education, the school principal is officially appointed, and appointed so that he is responsible for managing teaching, staffing, student affairs,

buildings and grounds (facilities and infrastructure), finance, and the relationship between educational institutions and the community, in addition to his duties in supervising education and teaching (Bertrand & Rodela, 2018).

Unlike other organizations, educational institutions are a form of moral organization that is different from other forms of organization (Bangun, 2016). As an organization, the success of educational institutions is not only determined by educational leadership, but also by other educational staff and the process of the educational institution itself. (Republic of Indonesia, 2005). Educational leadership is obliged to coordinate educational staff in educational institutions to ensure the proper application of regulations in educational institutions (Mukhlisin, 2019).

According to (Cogalty & Karadag, 2014) Educational leadership is obliged to coordinate educational staff in educational institutions to ensure the proper application of regulations in educational institutions

b. Educational Leadership Functions

The main function of educational leaders according to (Diana Darmawati et al., 2017) is a group for learning to decide and work, including 1. Leaders help create an atmosphere of brotherhood and cooperation with a sense of freedom. 2. Leaders help groups organize themselves.

That is, participating in providing inspiration and support to the group as they set and explain their goals. 3.3. The leader helps the group establish work procedures. That is, helping the group analyze the situation and determine which procedure is most effective and efficient. 4. The leader is responsible for taking it, determined by the group. 5.5. Managers are responsible for developing and maintaining the existence of the organization

In addition, leaders must also do the following: 1. The work is easy and hassle-free because it can create a good atmosphere of cooperation and brotherhood. 2. You can organize in groups to achieve your goals. 3.3. You can create work methods for groups by looking at the environment so that they can choose more efficient and effective methods of being responsible for handling cases with groups and leading groups fairly.

c. Leadership In The Digital Age

In the digital era, especially in the revolutionary era 4.0, the use of digital technology is not an absolute determinant of an organization's competitive ability to adapt to the demands of environmental change. (Mukhlisin, 2019). Technology will increase productivity through physical and digital assistance systems, but will not replace human capabilities (Junita & Agilitas, 2021).

Leadership is a complex social process and is adaptive, covering 3 things, namely: Leaders, followers, and situations (Diana Darmawati et al., 2017). This definition means that leadership is a top-down process. The leader's task is to minimize the gap between the goals set and the actualization of their achievements (Cahyati et al., 2020).

In line with the disruption of industry 4.0, the leadership approach in managing organizations is undergoing reconceptualization. Digitalization has a major impact on change and the innovation process, the contribution of leaders to organizational performance is very significant through various decision choices in assessing the organizational environmental situation (Fadhli, 2017). Innovation-oriented decision-making and practice support within organizations. This can be done, among others, by conditioning cross-functional team collaboration and a work culture based on the innovation and creativity of members of the organization. The direction of organizational members is goal-oriented with flexible rules because the use of digital technology replaces standard routines.

Leadership in the digital era has the character of sharing leadership with members of an independent team-based organization. Leadership in the digital era

must have change capabilities, including the ability of leaders to quickly identify changes in the internal and external environment, and respond to changes that arise by making various adjustments to working conditions and processes.

Leaders in the digital era determine organizational visions that are aligned with the needs of the digital era later, by creating a roadmap to turn vision and mission into action to ensure the sustainability and effectiveness of change in the long term. Below is a picture of leadership attributes in the digital era, including:

1. Change Capability
2. System thinking and energetic
3. Shared Leadership and Independent Teamwork.
4. Flexibility
5. Entrepreneurial Leadership
6. Managing Knowledge
7. Integrated Connector
8. Managing Conflict
9. Technology Accelerator.

D. Conclusion

Leadership is generally defined as an ability in readiness possessed by a person to be able to influence, encourage, invite, guide, move, direct, and if necessary force people or groups to accept influence so that they can help achieve a goal. Educational

leadership is an especially important ability. can influence and regulate the movement and implementation of education to achieve goals effectively and efficiently.

Educational leadership is the ability to drive the implementation of education so that the educational goals that have been set can be achieved effectively and efficiently. Educational leadership is the ability to influence and move others to achieve educational goals freely and voluntarily.

Leadership in the digital era has the character of sharing leadership with members of an independent team-based organization. Leadership in the digital era must have change capabilities including the ability of leaders to quickly identify changes in the internal and external environment, and respond to changes that arise by making various adjustments to conditions and work processes, Leaders in the digital era determine organizational visions that are aligned with the needs of the digital era then, by creating a roadmap to turn the vision and mission into action to ensure the sustainability and effectiveness of the change in the long term.

E. Acknowledgments

The author would like to thank all parties who have helped carry out this research, even though this research is a literature

study.

F. Conflict of Interest

No Conflict of Interest

Reference

- Bangun, S. Y. (2016). Peran Pendidikan Jasmani dan Olahraga pada Lembaga Pendidikan di Indonesia. *Jurnal Publikasi Pendidikan*, 6(3), 156–167. <https://doi.org/10.26858/publikan.v6i3.2270>
- Bertrand, M., & Rodela, K. C. (2018). *A Framework for Rethinking Educational Leadership in the Margins: Implications for Social Justice Leadership Preparation*. 10–37. <https://doi.org/10.1177/1942775117739414>
- Cahyati, S., Kusumawati, I., & Irianto, D. P. (2020). Gaya Kepemimpinan Pelatih Hapkido Daerah Istimewa Yogyakarta. *Journal of Sport and Health*, 1(2), 77–83. <http://ejournal.mercubuana-yogya.ac.id/index.php/psikologi/index>
- Cogalty, N., & Karadag, E. (2014). *School Leadership and Organizational Justice: A Meta-Analysis with Turkey Representative Sample*. 2. <https://doi.org/10.5296/ije.v6i1.4865>
- Diana Darmawati, T., Rahayu, A. R., & R.C. (2017). Leadership Guru Pendidikan Jasmani Olahraga dan Kesehatan di SMP Ogan Komering Ulu Timur Sumatera Selatan. *Journal of Physical Education and Sports*, 6(2), 108–116. <https://journal.unnes.ac.id/sju/index.php/jpes/article/view/17359>
- Fadhli, M. (2017). Manajemen Peningkatan Mutu Pendidikan. *Tadbir: Jurnal Studi Manajemen Pendidikan*, 1(2), 215–241. <https://doi.org/10.29240/jsmp.v1i2.295>
- Gea, B. P., Putrawan, I. M., & Miarsyah, M. (2019). Biological Teachers Motivation Based On School Leadership And Self-Efficacy. *International Journal Of Engineering Technologies And Management*, 6(5).
- Herliana, M. N. (2017). Hubungan Peran Kepemimpinan Kepala Sekolah, Iklim Organisasi Sekolah dan Kinerja Guru Dengan Prestasi Belajar Pendidikan Jasmani Olahraga Kesehatan Siswa SMP Negeri Se-Kota Tasikmalaya. *Journal Sport Area*, 2(2), 44–52. [https://doi.org/10.25299/sportarea.2017.vol2\(2\).880](https://doi.org/10.25299/sportarea.2017.vol2(2).880)
- Hogan, R., & Sherman, R. A. (2020). Personality theory and the nature of human nature. *Personality and Individual Differences*, 152(8), 1–5. <https://doi.org/10.1016/j.paid.2019.10>

- 9561
- Junita, A. (2020). *Kepemimpinan agile 4.0*.
- Junita, A., & Agilitas, T. (2021). KEPEMIMPINAN AGILE 4.0. *Leadership Di Era Digital*, 37.
- Mukhlisin, A. (2019). Kepemimpinan Pendidikan Di Era Revolusi Industri 4.0. *Jurnal Tawadhu*, 3(1), 674–692.
- Nasution, W. N. (2016). Kepemimpinan pendidikan di sekolah. *Jurnal Tarbiyah*, 22(1).
- Novian, G., Purnamasari, I., & Noors, M. (2020). Hubungan gaya Kepemimpinan Pelatih Dengan Prestasi Atlet Taekwondo. *Gladi: Jurnal Ilmu Keolahragaan*, 11(02), 151–164.
<https://doi.org/10.21009/GJIK.112.08>
- Phaneuf, J. É., Boudrias, J. S., Rousseau, V., & Brunelle, É. (2016). Personality and transformational leadership: The moderating effect of organizational context. *Personality and Individual Differences*, 102, 30–35.
<https://doi.org/10.1016/j.paid.2016.06.052>
- Republic of Indonesia. (2005). Undang-Undang Republik Indonesia, Tentang Guru dan Dosen. In *Pemerintah Indonesia* (pp. 1–50).
<http://sumberdaya.ristekdikti.go.id/wp-content/uploads/2016/02/uu-nomor-14-tahun-2005-ttg-guru-dan-dosen.pdf>
- Sinulingga, A., & Pertiwi, D. (2019). Profesionalisme guru pendidikan jasmani dari kepemimpinan kepala sekolah , budaya sekolah hingga motivasi kerja guru. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 5(2), 296–311.
https://doi.org/10.29407/js_unpgri.v5i2.13113
- Wahyudin, U., Bahrudin, E., & Sa'diyah, M. (2018). Pola Kepemimpinan Kepala Sekolah Dalam Membangun Akhlak Peserta Didik. *Tawazun: Jurnal Pendidikan Islam*, 11(1), 52–74.
<https://doi.org/10.32832/tawazun.v11i1.1659>
- Wibowo, U. B. (2011). Teori Kepemimpinan. *Badan Kepegawaian Daerah Kota Yogyakarta [Skripsi]. [Internet]. [Diunduh 26 September 2017]. Tersedia Pada: Http://Staff.Uny.Ac.Id/Sites/Default/Files/Tmp/C, 20201113.*



UNIMED Court Tennis Community Forehand Drive Capability Review

Gulasa Octo Gilbert Sihombing*, Rahma Dewi, Nurkadri

Fakultas Ilmu Keolahragaan, Universitas Negeri Medan, Jl. Willièm Iskandar Psr.V, Sumatera Utara, 2021, Indonesia

e-mail: gulasa@mhs.unimed.ac.id, rahmadewi@unimed.ac.id, nurkadri@unimed.ac.id

Abstract

The purpose of this study was to determine the level of forehand driveability of the UNIMED tennis community. This research is descriptive. The population in the study was 15 Unimed field tennis community athletes with total sampling, which means that the entire population is the sample in this study. The instrument in this study used the Hewitt tennis achievement test forehand drive to measure forehand driveability. Based on the tests carried out, the forehand drive capability was obtained with an average value of 15.46. The average results obtained from each athlete illustrate that the ability of the UNIMED tennis community's forehand drive is in the sufficient category. One of the factors causing low forehand driveability is the athlete's error in doing footwork. These results indicate that regular and continuous training is necessary to improve forehand driveability, one of which is footwork training.

Keywords: *forehand drive, UNIMED tennis community, descriptive analysis, footwork*

corresponding author: gulasa@mhs.unimed.ac.id

Artikel Info:

Submitted: 15/05/2022

Revised: 29/06/2022

Accepted: 18/08/2022

Published: 30/11/2022

How to Cite: Sihombing, G.O. G. (2022). UNIMED Court Tennis Community Forehand Drive Capability Review. *Journal Coaching Education Sports*, 3(2), halaman. <https://doi.org/10.31599/jces.v3i2.1158>

Author's Contribution: a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a Creative Commons Attribution 4.0 International License

A. Introduction

Sport is an important part of our daily life, a human necessity and helps our physical and mental health (Siagian, 2021). Sport is an exercise activity or physical activity to strengthen the body (Bangun, 2016). Sport is not only done by sportsmen for achievement, but many people only exercise for recreation. Sport can also affect the mental health of the players so that it can provide benefits, namely (1) reducing stress, (2) increasing brain performance, (3) reducing anxiety and depression, (4) increasing intracerebral brain and increasing neurotransmitters. (5) aging prevention. (6) increase happiness and increase self-confidence (Siahaan, 2017). In addition, sports also play a role in empowering countries to implement sustainable development systems. This sport has become a career for some people. This is reinforced by the opinion Siahaan (2017) that sport has developed into an industry in that many people rely on sports activities to make a living.

Tennis is one of the most popular sports in Indonesia. Court tennis is a small ball game played with a racket (Fakhi, 2019). Tennis matches are often held from junior to senior level (generally) to enhance athletic coaching and development (Firdaus, 2011). Court tennis is a sport that

can be played individually by teams consisting of two players (singles) and four players (doubles). The basic principle of playing tennis is to hit the ball directly and enter the opponent's court (Alim, 2015). There are many aspects a tennis coach needs to consider. For example the technical and tactical aspects of playing tennis (Setyohardani et al., 2015). To train athletes who excel in the field of tennis, it is first necessary to master and practice basic skills (Arifianto & Raibowo, 2020). Tennis has several basic techniques, including (1) forehand, (2) backhand, (3) serve, and (4) volleyball.

The forehand drive is a punching technique that is dominantly done with the right hand. Forehand drives are shots that are swung forward behind the body with the front of the racket or palms facing the ball (Soegiyanto & Nugroho, 2012). A forehand shot is a shot that includes a ground shot, seen from the process of its movement, and a ground shot technique is hitting the ball after it first bounces on the court (Jatra et al., 2020). According to Navavan (2021), The forehand drive is a type of tennis game that is hit after the ball has bounced off the court. The forehand stroke itself is the easiest to teach and the most commonly used in tennis. At least half of all tennis strokes are forehand strokes (Tarigan & Supriadi, 2021).

The forehand has become the weapon of choice for most tennis players today (Rive & Williams, 2012). According to (Siahaan, 2017), The forehand is a very important shot in tennis and the ball is kept low over the net for shots in the backline area. From the explanation above we can conclude that the forehand is the most important stroke in tennis. This is because this shot can be used as a weapon for game management in tennis.

The UNIMED tennis community is a good idea before offering a training program to test and measure to determine an athlete's performance level and to find out which training program is offered. efficient when hitting a forehand drive and lack of acceleration when swinging the racket, this error causes the desired target to be inaccurate and the resulting shot tends to go out and land on the net.

From the results of observations made, it can be seen that most athletes from the UNIMED tennis community still have a low level of forehand driveability. On this basis, it becomes the rationale for researching the level of forehand driveability by conducting tests and measurements.

The purpose of this research is to systematically and precisely explain the facts and special characteristics of the subjects so that the course of study can be

determined. This is by the opinion that the data obtained from the measurement results are very useful for the evaluation needs and decision-making of the training process (Sepdanius et al., 2019). For this reason, researchers wanted to carry out tests and measurements to determine the level of forehand drive skills of the UNIMED tennis community.

B. Method

1. This research was conducted using the descriptive method. The population of this study was 15 Unimed tennis community athletes and the sample was taken using the total sampling method. In this study, the researchers elaborated on the level of forehand driveability of the athletes in the UNIMED tennis community. This study used the Hewitt Tennis Performance Test which is a forehand drive test instrument used to collect data on the level of forehand driveability of athletes from the UNIMED tennis community. The implementation mechanism is as follows:

- a. The sample stands behind the center mark on the baseline line.
- b. Each sample is given a chance of 10 balls and 2 balls for a trial shot.
- c. The feeder stands across the net.

- d. After the ball is fed to the forehand and after the ball is hit, the sample must return to its starting position and prepare for the next shot.
- e. If the bait given by the feeder does not match the sample, you can skip it and ask to be repeated.
- f. Scoring: every ball that is hit passes between the net and the rope and falls on the target, the

points will be calculated according to the number of target points, if the ball is hit over the rope and enters the target then the points obtained are half of the total points on the target if the ball is out then the point is 0, if the ball that is hit falls on the boundary of the target line then the point taken is the point that is greater than between the two targets.

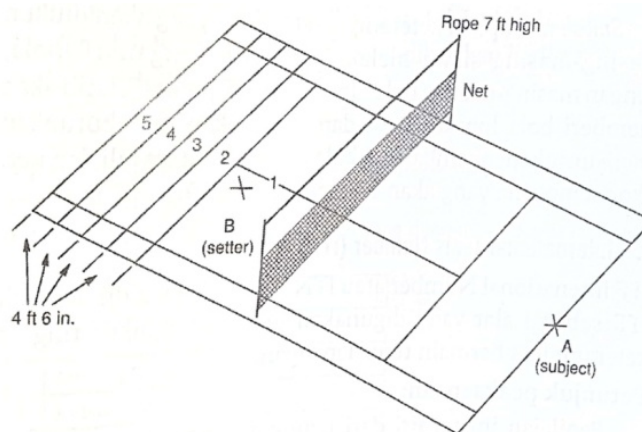


Figure 1. Instruments forehand drive Hewitt tennis achievement test (Sepdanius et al., 2019)

Table 1. Norma forehand drive Hewitt tennis achievement test according to Collins and Hodges

Keterangan	Norma
Baik Sekali (BS)	29-39
Baik (B)	22-28
Cukup (C)	09-21
Kurang (K)	04-08
Kurang Sekali (KS)	01-03

Sumber : (Sianipar, 2019)

In addition, the data obtained from the test results using the above equipment were analyzed using descriptive statistical techniques. In other words, write down the test results and measure the athlete's forehand driving ability using the following formula.

$$P = \frac{f}{n} \times 100\%$$

Information :

P = Percentage

F = Frequency

N = Number of test samples

C. Result And Discussion

Result

The data obtained are data taken from test results using the Hewitt tennis achievement test forehand drive instrument. The following are test results

Table 2. Data Result Outcomes Forehand Drive Hewitt Tennis Achievement Test

Sampel	1	2	3	4	5	6	7	8	9	10	Total	Category
Sampel 1	0	0	3	0	3	4	0	2	1	1	14	C
Sampel 2	0	3	2	3	2	1	0	7	0	0	14	C
Sampel 3	5	2	4	1	5	5	4	2	2	1	31	BS
Sampel 4	0	2	2	2	3	4	2	0	1	0	16	C
Sampel 5	0	0	1	0	1	1	1	2	2	0	8	K
Sampel 6	0	3	0	0	3	1	2	2	0	2	13	C
Sampel 7	2	1	0	0	1	1	2	0	0	2	9	C
Sampel 8	1	0	1	2	1	0	2	3	1	0	11	C
Sampel 9	4	5	4	3	5	4	3	3	2	4	37	BS
Sampel 10	0	2	0	0	5	0	3	2	0	0	12	C
Sampel 11	1	2	1	0	0	0	2	1	0	1	8	K
Sampel 12	4	0	4	3	2	1	2	1	0	2	19	C
Sampel 13	0	3	2	3	0	2	2	1	1	0	14	C
Sampel 14	0	0	1	4	1	3	0	0	0	5	13	C
Sampel 15	2	0	3	0	5	2	0	1	0	0	13	C

From the data above we can see that the results of the Hewitt Tennis Performance Forehand Drive Test from the tennis community were categorized into three categories, very good, normal, and poor, according to the criteria used. Two in the very good category, 11 in the good category, and two in the bad category.

From the results of the study, data collection began on the field by testing Hewitt's tennis performance using the forehand drive test without pre-testing. Therefore, the reference for discussing the results of this study is: Based on a review of forehand driveability conducted in the UNIMED tennis community using the Hewitt Tennis Performance Test, the average result of each athlete shows forehand drive-tennis ability. The UNIMED community field has an average score of 15.46. It is in the Moderate category and has been converted using

using the Hewitt tennis achievement test instrument forehand drive which has been converted according to the Hewitt tennis achievement test forehand drive norm.

Hewitt's Forehand Drive Tennis Proficiency Test criteria.

Discussion

From the results of tests conducted on athletes, it can be seen that there were 2 athletes in the very good category, 11 athletes in the sufficient category, and 2 athletes in the poor category. To the initial goal of the researcher, namely to determine the level of forehand driveability of the UNIMED tennis community, if the results of the test are averaged to be 15.46, the athlete of the UNIMED tennis community is included in the sufficient category.

The low level of forehand driveability in the UNIMED tennis community is inseparable from the athlete's mistakes when performing footwork. This is in line with Zulvid dan Arwandi (2019) who argues that in the sport of tennis a good shot is created when a person can place the

correct body position. Sahri and Prabowo (2021) also argue in their research that footwork is a technique for regulating foot movements in a tennis game, the better the footwork of a tennis athlete, the better the tennis player's performance will be. Tennis players must cover a fairly large area, therefore a footwork technique is needed that is rich in various variations and is also required to play the game quickly, and precisely, and be able to observe the nature

D. Conclusion

Based on the results of the Hewitt tennis achievement test forehand drive conducted at the UNIMED tennis community, the results showed that 2 athletes were in the very good category, 11 athletes were in the moderate category and 2 athletes were in the poor category. It can be concluded after conducting a review of forehand drive skills in the UNIMED tennis community that the ability is in the sufficient category with an average value of 15.46.

E. Acknowledgements

The author would like to thank the supervisor who has guided me so that this article can be completed. don't forget to thank the UNIMED atlet community who are willing to be samples of this research.

F. Conflict of Interest

No conflict of interest

Reference

- Alim, A. (2015). Pengaruh Olahraga Terprogram Terhadap Tekanan Darah dan Daya Tahan Kardiorespirasi Pada Atlet Pelatda Sleman Cabang Tennis Lapangan. *Medikora*, 2. <https://doi.org/10.21831/medikora.v0i2.24651>
- Arikunto, S. (2006). Prosedur penelitian : suatu pendekatan praktek / Suharsimi Arikunto. *Rineka Cipta*.

of the ball (Sinulingga & Nova, 2020).

Based on relevant sources, it can be seen that one of the factors that causes the category of the ability of the UNIMED tennis community's forehand drive to be in the sufficient category is the number of players who still do poor footwork. Thus one way to improve forehand drive ability can be done with regular and continuous footwork exercises.

- Bangun, S. Y. (2016). Peran Pendidikan Jasmani dan Olahraga Pada Lembaga Pendidikan di Indonesia. *Publikasi Pendidikan*, 6(3). <https://doi.org/10.26858/publikan.v6i3.2270>
- Firdaus, K. (2011). Evaluasi Program Pembinaan Olahraga Tennis Lapangan di Kota Padang. *Media Ilmu Keolahragaan Indonesia*, 1(2).
- Frans Devin Tarigan, & Amir Supriadi. (2021). Pengembangan Alat Latihan Ketepatan Sasaran *Forehand Drive* Pada Cabang Olahraga Tennis Lapangan Tahun 2021. *Journal Physical Health Recreation*, 2(1). <https://doi.org/10.55081/jphr.v2i1.520>
- Hamdi saiful, A., & E, B. (2014). Metode penelitian kuantitatif aplikasi dalam pendidikan. In *Metode penelitian kuantitatif aplikasi dalam pendidikan*.
- Irfan Arifianto, & Raibowo, S. (2020). Model Latihan Koordinasi Dalam Bentuk Video Menggunakan Variasi Tekanan Bola Untuk Atlet Tennis

- Lapangan Tingkat Yuniior. *Stand : Journal Sports Teaching and Development*, 1(2).
<https://doi.org/10.36456/j-stand.v1i2.2671>
- Jatra, R., Risma, N., & Saputra, Y. (2020). Kemampuan *Groundstroke* UKM Tenis Lapangan. *Jurnal MensSana*, 5(1).
<https://doi.org/10.24036/jm.v5i1.129>
- Nababan, V. A. (2021). Pengaruh Latihan *Groundstroke* Dengan Menggunakan Sasaran Terhadap Kemampuan *Groundstroke*. *Jurnal Prestasi*, 5(1).
<https://doi.org/10.24114/jp.v5i1.25602>
- Prabowo, A., Raibowo, S., Nopianto, Y. E., & Sahri, J. (2021). *Development of Digital Based Tennis Footwork Instruments*. *Halaman Olahraga Nusantara (Jurnal Ilmu Keolahragaan)*.
<https://doi.org/10.31851/hon.v4i2.5377>
- Rive, J., & Williams, S. (2012). *Tennis skills & drills*. Human Kinetics. www.HumanKinetics.com
- Sepdanius, E., Rifki, M. S., & Komaini, A. (2019). Tes Dan Pengukuran Olahraga. In *Buku Tes Dan Pengukuran Anton*. PT. RajaGrafindo Persada.
- Setyohardani, F. C., Soedjatmiko, & Kriswantoro. (2015). Perbedaan Latihan Drive Menggunakan Arah Bola Depan-Belakang dan Kanan-Kiri pada Tenis. *Unnes Journal of Sport Sciences*, Vol. 4(2).
- Siagian, S. (2021). Pengaruh Latihan *Medicine Ball Twist Toss* Dan *Forearm Pronation Exercise* Terhadap Kemampuan *Forehand Drive Tennis*. *Jurnal Prestasi*5(1).
<https://doi.org/10.24114/jp.v5i1.25601>
- Siahaan, D. (2017). Pengaruh Latihan *Horizontal Swing* Dan Latihan *Side Lateral Raise* Terhadap Kemampuan *Forehand Drive* Dalam Permainan Tenis Lapangan. *Jurnal Prestasi*, 1(2), 23–28.
<https://doi.org/10.24114/jp.v1i2.8060>
- Sianipar, M. A. (2019). Perbedaan Pengaruh Latihan *Forehand Drive* Menggunakan *Feeding* Dengan Latihan *Forehand Drive Groundstroke* Ke Dinding Terhadap Hasil *Forehand Drive*. *Jurnal Prestasi*, 2(4), 38.
<https://doi.org/10.24114/jp.v2i4.11914>
- Sinulingga, A. R., & Nova, A. (2020). Pengaruh Latihan *Footwork* Terhadap Akurasi Pukulan *Forehand Groundstroke* Tenis Lapangan. *Jurnal Ilmiah STOKBina Guna Medan*, 8(1), 1–7.

<https://doi.org/https://doi.org/10.5508>

[1/jsbg.v9i1.256](https://doi.org/https://doi.org/10.5508/1/jsbg.v9i1.256)

- Soegiyanto, Z. A., & Nugroho, P. (2012). Pengaruh Variasi Latihan *Forehand Drive* Terhadap Kemampuan Melakukan *Forehand Drive* Tennis Lapangan Bagi Petenis Pemula. *Journal of Sport Sciences and Fitness*, 1(2), 32–40.
- Sugiyono. (2014). Memahami penelitian kualitatif. 2014/Sugiyono. Bandung: Alfabeta.
- Syakad Al Fakhi, E. B. (2019). Kontribusi Kecepatan Reaksi dan Kekuatan Otot Lengan Terhadap Kemampuan Pukulan *Backhand* Tennis Lapangan. *Jurnal Performa*.
- Zulvid, F., & Arwandi, J. (2019). Latihan Footwork Berpengaruh Terhadap Kemampuan *Groundstroke* Tennis Lapangan. *Patriot*.



Volleyball Smash Ability Level of the Athletes of the Medan Women's Club Volleyball

Andi Nata Purba*, Nurkadri, Indra Darma Sitepu

Pendidikan Kepelatihan Olahraga, Fakultas Ilmu Keolahragaan, Universitas Negeri Medan, Jl. Willièm Iskandar
Psr.V, Sumatera Utara, 2021, Indonesia

e-mail: andinatapurbal@gmail.com, nurkadri@unimed.ac.id, indrasitepu@unimed.ac.id

Abstract

The purpose of this study was to determine the level of smash ability of the athletes of the Women's Volleyball Club. This research is a descriptive study with the research population at the Bina Putri Volleyball Club with the sampling technique using the total sampling technique, which means the number of samples is 10 people. The instrument used to measure the ability to smash is the Nurhasan smash attack instrument. From the tests carried out, the results of the athlete's smash ability were obtained with an average score of 6.6. The average score obtained shows that the smash ability of the athletes of the Bina Putri Medan Volleyball Club is included in the less category with a value of 2. One of the factors causing the low smash ability of the athletes of the Bina Putri Medan Volleyball Club is the weak explosive power of the athletes' leg muscles. These results indicate that it is necessary to carry out exercises aimed at increasing the explosive power of the leg muscles regularly and continuously in an effort to increase the explosive power of the leg muscles.

Keywords: Smash, Bina Putri Volleyball Club In Medan, Descriptive Analysis, Leg Muscle Explosive Power

corresponding author: andinatapurbal@gmail.com

Artikel Info:

Submitted: 12/06/2022

Revised: 29/06/2022

Accepted: 27/11/2020

Published: 30/11/2022

How to Cite: Purba, A, N., Nurkadri., Sitepu, I, D.. (2022). Volleyball Smash Ability Level Of The Athetes Of the Medan Women's Club Volleyball. *Journal Coaching Education Sports*, 3(2), 139-. <https://doi.org/10.31599/jces.v3i2.1202>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection

A. Introduction

Olahraga merupakan salah satu bagian from daily activities which are important and become human needs as one of meeting the needs of a healthy body and spirit. This is in line with the opinion (Oktariana & Hardiyono, 2020) which explains that sport is a human need which is a basic element and is very influential in forming a strong soul (spiritual) and body (body or body). According to (Lardika & Salam, 2019) sport is a means by which individuals and groups can actualize themselves to arouse their sense of self-confidence and national pride.

Today sport is one of the ways to get achievements from the regional level to the national level. Sport is one of the nation's unifying tools that can shape an individual and collective character, as well as influence other development sectors. This is the potential that exists in sports (Rachmi et al., 2021). Exercise also influences mental health for the perpetrators, while the benefits of exercising include: (1) reducing stress, (2) improving brain performance, (3) reducing anxiety and depression, (4) expediting brain neurotransmitters, (5) as an antiaging, (6) increase feelings of happiness and self-confidence (Siahaan, 2017) including volleyball.

Bola voli merupakan salah satu cabang

a sport that is loved by the people of Indonesia because this sport can be played by all levels of society from children to adults. According to (Syauki, 2021) volleyball is a team game on a field measuring 18 m long and 9 m wide which divides the field into 2 equal sizes. Straight above it is the net, which is 2.43 m high and 2.24 m high. According to (Heriyadi & Hadiana, 2018) the game of volleyball is played using one ball which is reflected from one player to another by passing and ending with a smash on the opposing team, and the two teams are separated by a net with a certain height. The game of volleyball itself is included in the type of big ball game. In volleyball games, of course, there are aspects that need attention, one of which is the basic technique (Syamsi et al., 2021). There are four basic techniques in volleyball games, namely: serving, passing, blocking, and smashing (Edwan & Sutisyana, 2017).

Smash in volleyball is a technique for attacking and getting points. This is in line with (Wahyu Cirana et al., 2021) which suggests that smashes are a way of attacking each team to gain points. Smash itself is an act of hitting the ball down with full power, by jumping up and hitting the ball toward the opponent's field (Pujianto et al., 2021). Smash is a very important technique in volleyball. According to

(Pranopik, 2017) the smash technique is the most difficult technique and has complex movements so the smash technique must be trained in athletes from an early age because at an early age it is a stage that is vulnerable to motion errors. From some of the above expressions, it can be concluded that the smash is the most important technique in volleyball that is done to attack and the most difficult to do.

Likewise, the Bina Putri Club is quite an active volleyball club located in the city of Medan. This club contains female athletes. Based on observations at the Women's Development Club in April 2022. When the researchers made the observations, the researchers found that many athletes were still not good at smash techniques. This can be seen when smashing the resulting ball tends to get stuck in the net and out.

From the results of the observations made, it can be concluded that when carrying out the smash technique, most of the Bina Putri Club athletes are still not proficient at doing it, such as when making jumps, the athletes tend to have no explosive power in the leg muscles, so they often don't get to the resulting ball, which tends to get stuck in the net. One of the contributing factors is the lack of effectiveness of the training program given by the coach to athletes and the lack of ability of athletes to understand smash

techniques. On this basis, the researcher is interested in conducting tests and measurements of the smash ability of the Women's Development Club athletes. The aim is to find out and describe in fact and systematically the abilities possessed by athletes and can be the basis for having the right training program. This is in line with the opinion (of Sepdanius et al., 2019) who says that data obtained from measurement results are very useful for evaluation needs and decision-making in the training process. For this reason, it is necessary to carry out a study related to tests and measurements to determine the level of smash ability of Medan Women's Club athletes.

B. Method

This research uses the descriptive research method. The population in this study were Female Development Club athletes with samples taken using the total sampling method, which means the number of samples in this study was 10 athletes. This study will be described how the level of smash ability of Medan Women's Club volleyball athletes.

The test instrument for measuring smash ability used in this study is using the smash attack test according to (Cahyaningrum et al., 2018). The implementation mechanism is as follows:

1. The testee is in the attack area or free on the playing field.
2. The ball is bounced or fed near the top of the net toward the testee.
3. With or without starting, the testee jumps and hits the ball over the net into the opposite court where there is a goal with points.
4. Each testee is given 5 times to do the test.
5. How to score: the score is the number where the ball fell. The ball that touches the target is counted as a higher score. Score = 0, if the ball touches the net or the ball falls outside the target area. Test achievement is the sum of all target scores from 5 occasions.

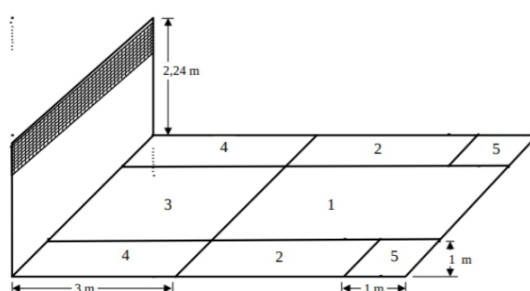


Figure 1. Smash attack test instrument (Lardika & Salam, 2019)

Table 1. Norma Tes

Skor Tes	Value	Category
21-25	5	Very well
16-20	4	Well
10-15	3	Enough
5-9	2	Not enough
0-4	1	Less Once

After obtaining the data using the instrument, then the data will be analyzed using descriptive statistical procedures using the following formula:

$$P = \frac{f}{n} \times 100\%$$

Information :

P = Percentage

F = Frequency

N = Number of test samples

C. Result And Discussion

Result

The data presented is data obtained from the test results using the Nurhasan smash attack instrument and by what it is with the smash ability of the Medan Putri Bina Volleyball Club. The following are the test results using Nurhasan's smash attack instrument.

Table 2. Smash Test Results Data

Sampel	1	2	3	4	5	Total	Value	Category
Sampel 1	1	1	1	1	2	6	2	K
Sampel 2	2	2	0	0	5	7	2	K
Sampel 3	4	4	0	2	4	14	3	C
Sampel 4	1	0	2	1	1	5	2	K
Sampel 5	2	1	1	0	2	6	2	K
Sampel 6	0	1	1	0	2	4	1	KS
Sampel 7	2	0	2	1	3	8	2	K
Sampel 8	3	1	1	4	0	9	2	K
Sampel 9	0	0	1	0	2	3	2	K
Sampel 10	0	4	4	4	2	14	3	C

From the data above it is clear that the results of the smash ability test from the Medan Women's Volleyball Club are divided into 3 categories. By the test norms, there are 2 athletes with a value of 3 in the sufficient category, 7 athletes with a value of 2 in a less category, and 1 athlete with a value of 1 in a very poor category.

Based on the results of research conducted from data collection using the snash test instrument without being given previous treatment. For this reason, the reference for discussing the results of this study is: based on the results of the smash athlete ability test of the Bina Putri Medan Volleyball Club using the Nurhasan smash test instrument, the smash ability of the athletes of the Bina Putri Medan Volleyball Club is included in the sufficient category with a value of 2, with an average score obtained 6.6 which has been converted by Nurhasan's smash test norms.

Discussion

By the initial goal of the researcher, namely to determine the smash ability level of the athletes of the Bina Putri Medan Volleyball Club, it can be seen that there were 2 athletes in the moderate category, 7 athletes in the less category, and 1 athlete in the very less category. The average athlete produced is in the less category with a value of 2, with an average total score of 6.6.

The low level of smash ability of the athletes of the Medan Women's Volleyball Club is inseparable from the weak explosive power of the athletes' leg muscles so many of the balls produced tend to get caught in the net. According to (Edwan & Sutisyana, 2017) the jumping smash technique is greatly influenced by the quality of the leg muscles. This is in line with the opinion (Oktariana & Hardiyono, 2020) which suggests that the explosive power of the leg muscles is a factor that

determines success in sports, especially in volleyball smashes.

Based on relevant sources, it can be seen that one of the factors causing the level of smash ability of the athletes of the Medan Women's Volleyball Club in the

D. Conclusion

Based on the results of the smash attack test according to Nurhasan on the athletes of the Medan Women's Volleyball Club, it can be seen that 2 athletes fall into the sufficient category, 7 athletes fall into the less category and 1 athlete falls into the very less category. Thus it can be concluded that after conducting a review of the smash ability of the athletes of the Medan Putri Bina Volleyball Club, the average level of athlete's smash ability is included in the less category with a score of 6.6.

E. Acknowledgements

The author would like to thank the supervisor who has guided me so that this article can be completed. don't forget to thank the UNIMED altet community who are willing to be samples of this research.

F. Conflict of Interest

No conflict of interest

Reference

Ahmad Yanuar Syauki. (2021). Pengaruh

less category is the weak explosive power of the athletes' leg muscles. Therefore, exercises can be done to increase the explosive power of the leg muscles regularly and continuously.

Latihan Beban Terhadap Pukulan

Smash Pada Permainan Bola Voli.

Sportif: Jurnal Pendidikan Jasmani, Kesehatan, Dan Rekreasi, 6(1).

<https://doi.org/10.54438/sportif.v6i1.264>

Cahyaningrum, G. K., Asnar, E., &

Wardani, T. (2018). Perbandingan

Latihan Bayangan Dengan Drilling

Dan Strokes Terhadap Kecepatan

Reaksi Dan Ketepatan Smash. *Jurnal*

Sportif: Jurnal Penelitian

Pembelajaran, 4(2), 159–170.

https://doi.org/10.29407/js_unpgri.v4i2.12328

Edwan, Ari Sutisyana, Bogy Restu Ilahi.

(2017). *Jurnal Ilmiah Pendidikan*

Jasmani, 1 (1) 2017. *Pengaruh*

Metode Latihan Plyometric Terhadap

Kemampuan Jumping Smash Bola

Voli Siswa Ekstrakurikuler Smpn 1

Bermani Ilir Kabupaten Kepahiang,

1(1).

Heriyadi, D., & Hadiana, O. (2018).

Perbandingan Model Discovery

Learning Dengan Model Peer

Teaching Terhadap Teknik Passing

- Bawah. *Juara : Jurnal Olahraga*, 3(2), 89.
<https://doi.org/10.33222/juara.v3i2.240>
- Lardika, R. A., & Salam, S. (2019). Tinjauan Kemampuan Keterampilan Teknik Dasar Bola Voli Pada Siswa Ekstrakurikuler Bola Voli Sman 1 Bunut. *Journal Of Sport Education (Jope)*, 2(1).
<https://doi.org/10.31258/jope.2.1.24-33>
- Nugroho, F. E. (2016). Perancangan Sistem Informasi Penjualan Online Studi Kasus Tokoku. *Simetris : Jurnal Teknik Mesin, Elektro Dan Ilmu Komputer*, 7(2).
<https://doi.org/10.24176/simet.v7i2.786>
- Oktariana, D., & Hardiyono, B. (2020). Pengaruh Daya Ledak Otot Lengan, Daya Ledak Otot Tungkai Dan Kekuatan Otot Perut Terhadap Hasil Smash Bola Voli Pada Siswa Smk Negeri 3 Palembang. *Journal Coaching Education Sports*, 1(1), 13–24.
<https://doi.org/10.31599/jces.v1i1.82>
- Pranopik, M. R. (2017). Pengembangan Variasi Latihan Smash Bola Voli. *Jurnal Prestasi*, 1(1).
<https://doi.org/10.24114/jp.v1i1.6495>
- Pujianto, D., Insansityo, B., & Syafril. (2021). Upaya Meningkatkan Hasil Belajar Passing Bawah Bola Voli Melalui Model Pembelajaran Kooperatif Tipe Team Games Tournament. *Journal Coaching Education Sports*, 2(2), 205–212.
<https://doi.org/10.31599/jces.v2i2.747>
- Rachmi Marsheilla Aguss, Eko Bagus Fahrizqi, P. A. W. (2021). Efektivitas Vertical Jump Terhadap Kemampuan Smash Bola Voli Putri. *Jurnal Pendidikan Jasmani Indonesia*, 17(1), 1–9.
- Sepdanius, E., Rifki, M. S., & Komaini, A. (2019). Tes Dan Pengukuran Olahraga. In *Buku Tes Dan Pengukuran Anton*. Pt. Rajagrafindo Persada.
- Siahaan, D. (2017). Pengaruh Latihan Horizontal Swing Dan Latihan Side Lateral Raise Terhadap Kemampuan Forehand Drive Dalam Permainan Tenis Lapangan. *Jurnal Prestasi*, 1(2), 23–28.
<https://doi.org/10.24114/jp.v1i2.8060>
- Syamsi, N., Yarmani, Y., & Arwin, A. (2021). Survei Kondisi Fisik Dan Teknik Dasar Bola Voli Putra Pada Masa New Normal Di Klub Sparta

Rejang Lebong. *Sport Gymnastics* :
Jurnal Ilmiah Pendidikan Jasmani,
2(1), 79–90.
<https://doi.org/10.33369/Gymnastics.V2i1.14878>

Wahyu Cirana, Arif Rohman Hakim, &
Untung Nugroho. (2021). Pengaruh
Latihan Drill Smash Dan Umpan
Smash Terhadap Keterampilan Smash
Bola Voli Pada Atlet Putra Usia 13-
15 Tahun Club Bola Voli Vita Solo
Tahun 2020. *Jurnal Ilmiah Penjas*
(Penelitian, Pendidikan Dan
Pengajaran), 7(1).
<https://doi.org/10.36728/Jip.V7i1.13>

81



The Effect Of Variations In Extensive Interval Training On Aerobic Endurance Fighter Muaythai Fightculture Medan

Verianto Tumangger *, David Siahaan

Pendidikan Keplatihan Olahraga , Universitas Negeri Medan, Jl. Willem Iskandar / Pasar V
Kota Medan 20221 Sumatera Utara, Indonesia.

e-mail: veriantotumangger@gmail.com, davidsiahaan@unimed.ac.id

Abstract

This study aims to determine the Effect of Extensive Interval Training Variations on the Endurance of the Aerobic Fighter Muaythai FightCulture Medan 2021. This research was carried out in the UNIMED Multi-Purpose Field. The population in this study were Fighter Muaythai Fightculture and the sampling technique used a total sampling technique of 5 Muaythai athletes. The research method used was experimental method (treatment) with data collection techniques involving one independent variable and one dependent variable, namely Extensive Interval Training Variation as the independent variable and Aerobic Endurance as the dependent variable. The results of hypothesis testing showed that the probability value (Asymp. Sig) was $0.043 < \text{significant level } 0.05$ (Asymp. Sig. (2-tailed) $0.043 < 0.05$). The conclusion of the study is that there is a significant effect of Extensive Interval training on improving the 2021 Muaythai Medan Fighter Fightculture.

Kata Kunci : *Interval Ekstensif, Daya Tahan Aerobic, Muaythai*

corresponding author: veriantotumangger@gmail.com

Artikel Info:

Submitted: 19/08/2022

Revised: 29/09/2022

Accepted: 30/11/2020

Published: 30/11/2022

How to Cite: Tumangger, V., Siahaan David. (2022). The Effect Of Variations In Extensive Interval Training On Aerobic Endurance Fighter Muaythai Fightculture Medan. *Journal Coaching Education Sports*, 3(2), 147-156. <https://doi.org/10.31599/jces.v3i2.1505>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

Sports coaching is part of efforts to improve the physical and spiritual health of the entire community, discipline, and sportsmanship, as well as the development of sports achievements that can generate national pride. In line with the existing reality, the public's need to exercise continues to increase by the goals and benefits of sports that cannot be doubted. The purpose of sport is explained by (Kosasih, 1985, p. 18) namely "The purpose of sport is not only for physical development but also for mental and spiritual development".

Muaythai is a martial art that uses kicks, punches, and slams, and is more dominant in the form of free combat martial arts that first originated in Thailand. The word Muay comes from the Sanskrit word "Maya" (martial boxing) and Thai comes from the word "Tai" (Thai tribe). Muaythai has competed in many championships, both at the district/city, provincial, and even national levels. Even Muaythai sports have also competed in various sporting events such as PRA-PON, PON, and SEA GAMES.

In achieving sports achievements several factors must be known and need special attention, namely 1. Physical factors 2. Technical factors, 3. Tactics factors and 4. Mental factors. The physical factor is the

basic thing that an athlete must have to become a champion. Physical condition plays a very important role in following the training program and when competing. One of the components in determining the physical condition of an athlete is endurance. The benchmark that is often used in determining endurance is the athlete's body's ability to take in oxygen to the fullest (Vo2Max).

Based on observations made by researchers, the lack of endurance of the Aerobic Fighter Muaythai Fightculture can be seen from the videos of their matches and training. On April 30, 2021, a field observation was carried out, and the results of a problem were found, namely, when doing the Padding Time 3 Round exercise, entering the 2nd round the Fighter experienced a decrease in stamina, which can be seen from the weakening punches and kicks and breath, and the researchers returned to watching the match video previously carried out, during the match all fighters were found to have the same problem, in fact by the time they entered the 2nd round the fighters had unintentionally shown fatigue gestures, so the tactics, techniques, and instructions in the next round were no longer carried out properly, observation data Known results From the five athletes, 3 athletes were found in the less category and 2 athletes in the sufficient

category. In this case, it proves that more effective actions are needed to be given to athletes so that the Aerobic Endurance of Fight Culture Muaythai Medan athletes is maximized .“.

One of the factors that cause low or lack of Aerobic endurance in athletes is the lack of physical training carried out by coaches and the minimal form of training given to increase Aerobic endurance in athletes.

Then, the researchers conducted interviews with coaches and athletes about what forms of exercise have been carried out so far to increase aerobic endurance, in this case, jogging. So after conducting the interview, information was obtained that the form of exercise carried out so far was only a form of basic physical exercise to increase endurance/stamina. In this case, the researcher will provide a form of exercise where the aim is to be able to increase Aerobic endurance, with a variety of Extensive Interval training, in this case, the researcher also wants to examine whether the exercise affects increasing Aerobic endurance in Muaythai Fight Culture Medan athletes.

Achieving an achievement in sports requires practice, the exercises that must be carried out must be correct, programmed, and continuous (Bompa, n.d., p. 37). "Exercise is a systematic process and works repeatedly over a long period, and is

increased gradually and individually aimed at establishing physiological and psychological functions to meet task demands." This is in line with the opinion (Satria, 2019) that systematic training will make it easier for the body to adapt to the training load and reduce the risk of injury.

Some physical components that need to be considered for development are cardiovascular endurance, strength endurance, muscle strength (strength), flexibility (flexibility), speed, stamina, agility (agility), muscle explosive power (power), and endurance strength (strength endurance).). These components are the main ones that must be trained and developed by athletes, especially by athletes in sports that require these components.

High-Intensity Interval Training (HIIT) is an efficient exercise for increasing physical ability which includes strength, aerobic and anaerobic endurance, flexibility, and coordination in one training session (Monaco, 2018) is a form of exercise that is used to increase endurance. aerobics (endurance). Practice techniques at the start and practice tactics. Extensive interval training means that the training load given to athletes has the following characteristics: a) Large training volume; b) Low or medium training load intensity; c) Long recovery time and; d) the frequency

and rhythm of the movements a little and slowly.

In the extensive interval training method, the exercise is performed with several repetitions and series. Each repetition and series is always followed by an interval time. What must be considered is not to run with the principle of interval training, that is, there is a systematic exchange between loading and recovery. In the extensive interval method, the loading time is also very decisive and this depends on what you want to achieve in an exercise. According to Syafruddin (Sulastio, 2018), the characteristics of the extensive interval method are moderate load intensity, namely 60% - 80%, high load volume/volume, and many repetitions, namely 20-30 times per series, not full intervals/rest, namely 45-90 seconds perseri, and the resulting training effect is an increase in speed endurance. Werner & Sharon, (Apriyanto, 2020) Cardio-pulmonary endurance is defined as the ability of the lungs, heart, and blood vessels to deliver sufficient amounts of oxygen into cells to meet the needs of physical activity for a long time

(Warni et al., 2017) Stated that VO₂Max is termed maximum aerobic power or the use of oxygen in the fastest tempo, that is, consumption of quite a lot of oxygen during sports activities. So it can be concluded that aerobic endurance (VO₂Max) refers to the ability to speed in

the use of oxygen not just how much oxygen is used, but for what purpose. However, it can be said that if someone does a job for a long time, then the need for oxygen to maintain endurance (stamina) becomes stable.

(Zulbahri, 2018) "aerobic durability is a basic physical component which cannot separate from increasing and protecting" (aerobic endurance is a basic physical component that cannot be separated from increasing and protecting). (Zulbahri & Melinda, 2019) General endurance or cardiorespiratory endurance is a person's ability to use his heart, respiratory and circulatory systems effectively in carrying out continuous work involving the contraction of several large muscles, at high intensity for quite a long time.

(Hardika et al., 2022) VO₂max is an important factor contributing to the aerobic endurance of athletes. VO₂max reflects a person's cardiorespiratory capacity so that the more oxygen that can be transported and consumed by the muscles that are active, the better the athlete's endurance will be. A principle for knowing VO₂max is that you must first understand the functions of the human body, this is because every cell needs oxygen to convert food energy into ATP (Adenosine Triphosphate) which is ready to use for the work of each cell that consumes the least oxygen is the muscles in

a resting state. Contracting muscle cells need a lot of ATP. As a result, the muscles used in exercise require more oxygen. Muscle cells need a lot of oxygen and produce CO₂. The need for oxygen and produce CO₂ can be measured through our breathing.

B. Method

This type of research is an experiment, where this study looks at the effect of extensive interval variations on aerobic endurance. Before the treatment (treatment) is carried out, a pre-test is given to the sample first. This pre-test aims to obtain initial data on the endurance of the Muay Thai fighter on the battlefield. This research was carried out in the multipurpose field of Medan State University

This treatment was carried out for 6 weeks with a frequency of exercise 3 times a week. Thus, the authors use the Extensive Interval method which is considered appropriate to the problem to be studied. The variables studied in this study were extensive interval training variations as the independent variable and aerobic endurance as the dependent variable. The population of this research is all fighters fighting culture in Medan, consisting of 5 people. Sampling was determined by total sampling so that the sample for this study was all Muaythai fight culture fighters in

the field, totaling 5 people who would be given the Extension interval training method. The instrument used in this study was a test of the endurance ability of the Muay Thai Aerobic fighter using the bleep test.

The data obtained will later be processed using the "Wilcoxon test". Before the data is processed, a requirements analysis test is carried out, namely the normality test using the Kolmogorov Smirnov test.

C. Result and Discussion

Result

Based on the analysis of the initial test data, the effect of interval training on the aerobic endurance ability of the Medan Muaythai Fightculture Fighter, namely with a sample of 5 people, the highest score was 53.9, the lowest score was 36.75, the average was 47.61 and the standard deviation (SD) was 6 ,60. Meanwhile, based on the analysis of the final test data, the effect of interval training variations on the aerobic endurance ability of the Medan Muaythai Fightculture Fighter, namely with a sample of 5 people, the highest score was 62.45, the lowest score was 50.5, the average was 57.43 and the standard deviation (SD) 4.91. For more details, a frequency distribution table will be made below:

Table 1. Distribution of Preliminary and Posttest Data Frequency The Effect of Extensive Interval Variation on Aerobic Endurance Ability

Category	Pre Test		Post Test			
	Interval	Frequen cy	Percent	Interval	Frequen cy	Percent
Well	>57	-	-	>57	3	60
Very well	52-56	-	-	52-56	2	40
Enough	42-52	1	20	42-52	-	-
Not enough	39-43	4	80	39-43	-	-
Less	<38	-	-	<38	-	-
Total		5	100		5	100

Source: Research Results (2020)

Table 2. Normality Test

Tests of Normality			
Data	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Pre Test	.287	5	.200*
Post Test	.248	5	.200*

Source: Research Results (2022)

Based on the results of processing the Normality test data with the Kolmogorov-Smirnov Test, the normality value of the data distribution is obtained as in the following table:

In the normality test table, the Pre-test and Post-test data above show the Sig

value. 0.200. This value is greater than the alpha value ($0.200 > 0.05$). So based on the results of the normality test it is known that the significance is $0.200 > 0.05$, it can be concluded that the distribution of data on the pre-test and post-test is normally distributed.

Table 3. Wilcocon Test

Test Statistics ^a	
Post Test - Pre Test	
Z	-2.023 ^b
Asymp. Sig. (2-tailed)	.043

Source: Research Results (2022)

This hypothesis was tested with a non-parametric test using the Wilcoxon test formula. The results of this hypothesis analysis are described in the attachment and summarized in the following table:

It is known that the probability value (Asymp. Sig) is $0.043 < 0.05$ significant level. it can be concluded that the value (Asymp. Sig) is $0.043 < 0.05$. then conclusions are drawn from the hypothesis

that $H_0 \equiv$ rejected, $H_1 \equiv$ Accepted. So it can be concluded with a Hypothetical sound, namely "There is an Effect of

Discussion

Extensive interval training to increase endurance Aerobic fighter Muaythai Fightculture Extensive interval training is a form of training to improve the physical condition of a Muaythai athlete. In other words, that with extensive intervals can increase the Maximum Oxygen Volume (Vo_{2Max}) / Aerobic Endurance of a Muaythai Athlete.

(Astuti et al., 2020) in principle, the extensive interval method is a training method that is the same as regular interval training in which intensity, repetition, number of sets, and rest are determined. The extensive interval method is known through medium load intensity which ranges from 60 to 80%, large amounts of load through many repetitions, and not full rest. So the implementation of the extensive interval method, namely the number of repetitions of the exercise, will physiologically affect the level of function of the organs of the body such as the heart, lungs, and blood vessels to the workload being carried out. Thus, it is hoped that the effect of the training will be an increase in endurance ability, what is meant here is aerobic endurance. In practice, the

~~Extensive Interval Training on Aerobic Endurance. Fighter Fightculture Muaythai Medan".~~

extensive interval method has certain characteristics and therefore allows a relatively large load volume. From this opinion, it can be explained that extensive interval training using medium-intensity loads allows us to provide large volumes through many repetitions. Thus this method can also affect the ability of aerobic endurance.

So you can be sure that Muaythai sports require good physical conditions to achieve satisfactory results. In this study, it discusses proving the form of Extensive Interval Training in increasing the Endurance of the Aerobic Fighter Muaythai Fightculture Medan 2021.

Application through the method of extensive interval training with the intensity of the exercise given starts low to moderate, the pulse in the implementation of the exercise is below 170 times per minute, the exercise repetitions are given a lot, the exercise intervals are carried out short, the number of sets of exercises given is large, the training distance starts 800 meters to 1200 meters shows a very good impact in increasing the Aerobic Endurance of athletes.

Based on the results of testing the

hypothesis proving that extensive interval training can have a significant effect on increasing the endurance of the Medan Muaythai Fightculture Aerobic fighter, this can be seen from the difference in the average value (mean) in the initial test before being given extensive interval training treatment, which is equal to 47.61 and after being given the treatment, an average value (mean) of 57.43 was obtained, meaning that there was an increase of 9.82. After analyzing the data on the results of the study using the Wilcoxon test, it was found that the probability (Asymp. Sig) was 0.043 <0.05. then $H_0 =$ rejected, $H_1 =$ Accepted. So it can be concluded with a hypothetical sound, namely "There is an Effect of Extensive Interval Training on the Endurance of the Aerobic Fighter Fightculture Muaythai Medan 2021". This means that extensive interval training by providing 16 exercises with a frequency of 3 times a week, turned out to have a significant effect on increasing the endurance of the Aerobic Fighter Muaythai Fightculture Medan.

This may be caused by the implementation of extensive interval training in this study and the repetition of the exercise increased every 3 meetings, with the implementation of the players running 200-1000 meters with a total of 28-38 repetitions. where the rest given between repetitions ranges from 45 to 90 seconds,

while rest between sets is 45-90 seconds so that the effect can increase the athlete's Aerobic Endurance. (Dikdik Zafar Sidik, M.Pd., Paulus L. Pesurnay, Drs. Luky Afari, n.d., p. 35) The extensive interval training method is carried out with the intensity of the exercise given starting low to moderate, the pulse during the exercise is below 170 times per minute, lots of exercise repetitions, short exercise intervals, a large number of exercise sets, 800 meters to 1200 meters of training distance. Furthermore, the intensive interval training method is given with the exercise intensity given between moderate to high, exercise pulse above 170 times per minute, exercise repetitions

Thus it can be concluded that there is an effect of extensive interval training on increasing the endurance of the Medan Muaythai Fightculture Aerobic fighter.

From a physiological point of view, the form of extensive running training contributes to changes in the work of the heart and lungs. This is the opinion put forward by (R. Soekarman, 1987) that in general aerobic physical exercise will contribute to the ability of the heart and lungs, while anaerobic exercise will contribute to increased strength and muscle hypertrophy. According to (Dr. Bafirman HB, M. Kes. & Dr. Asep Sujana Wahyuri, S.Sc., 2018, p.34) Physiological endurance is related to the ability of the heart and

respiratory organs. The ability of the heart to increase the minute volume (cardiac output) to transport oxygen and substances used in the metabolic system. With the heart's resistance to work, the blood will pump more smoothly so that the cells that require blood flow can be met according to their needs

Therefore, the most basic changes are the increase in metabolism, provision of aerobic energy, and increase in the cardiovascular system. Based on the above opinion, it is also in line with the opinion of (Peter G J M Janssen, 1987) which says that if a person does aerobic endurance sports for a certain period of time, the pulse reflex point will increase. This increase is due to changes in the cardiovascular system such as changes in heart size, changes in muscle

D. Conclusion

Based on the results of the research above, it can be concluded in this study that "There is a significant effect of extensive interval training on the Endurance of the Aerobic Fighter Muaythai Fightculture Medan 2021.

As for this research, as a continuation of the conclusions, namely as follows (1) the results of this study prove that extensive interval training can increase the endurance of the Aerobic Fighter Muaythai Fightculture Medan 2021. (2) To

mitochondria, changes in blood vessels as well peningkatkan kadar haemoglobin (HB) darah.

The results of the analysis of data and facts in the field and supported by relevant research, the researcher found that through the provision of an extensive interval training method it is very good to support a training process to improve the Aerobic Endurance of Athletes, through the application of this exercise it has a positive impact on increasing Aerobic Endurance which will later support for other aspects of training. adapted at least 3 articles that are by the results of the study. Furthermore, the relationship between the two is concluded to be a new theory or findings from research.

strengthen the results of this study, those who wish to carry out research to conduct research with the same title, in another sample group.

Trainers should pay attention to forms other than extensive interval training in an Aerobic Endurance training program in Muaythai sports.

E. Acknowledgements

The author would like to thank the supervisor who has guided me so that this article can be completed. don't forget to

thank the UNIMED atlet community who are willing to be samples of this research.

F. Conflict of Interest

No conflict of interest

Reference

- Apriyanto, K. D. (2020). Cardiorespiratory Endurance , Flexibility , Agility and Balance Profile of Sport Science Student in Sport Science Faculty Universitas Negeri. *Medikora*, 19(1), 17–23.
<https://journal.uny.ac.id/index.php/medikora>
- Astuti, Y., Zulfahri, Z., Erianti, E., & Rosmawati, R. (2020). Pelatihan Metode Interval Ekstensif Terhadap Kemampuan Daya Tahan Aerobik. *Jurnal Abdidas*, 1(3), 109–118.
<https://doi.org/10.31004/abdidas.v1i3.25>
- Bompa, O. T. (n.d.). *Theory And Methodology Of Training*. Dubuque. Kendall/Hunt Publishing company.
- Dikdik Zafar Sidik, M.Pd., Paulus L. Pesurnay, Drs. Luky Afari, M. P. (n.d.). *Pelatihan Kondisi Fisik*. PT. Remaja Rosdakarya.
- Dr. Bafirman HB, M.Kes., A., & Dr. Asep Sujana Wahyuri, S.Si., M. P. (2018). *PEMBENTUKAN KONDISI FISIK*. PT RajaGrafindo Persada.
- Hardika, N., Musa, S., Studi, P., Jasmani, P., Jongkat, K., Mempawah, K., & Maksimal, V. O. (2022). Pengaruh Metode Latihan Interval Anaerob ATP-PC Terhadap Peningkatan Vo_{2max} pada Atlet Lari Sprint IKIP PGRI Pontianak. 1(1), 60–68.
- Kosasih, E. (1985). *Olahraga Teknik dan Program Latihan*. Akademika Presindo.
- Monaco, M. (2018). The Effect of High Intensity Interval Training vs Resistance-Based Circuit Training. *Western Michigan University*.
https://scholarworks.wmich.edu/honors_theses/2999/
- Peter G J M Janssen. (1987). *Training lactate pulse rate*. Polar Electro.
- R. Soekarman. (S1987). *Dasar olahraga :untuk pembina, pelatih dan atlet*. Inti Idayu Press.
- Satria, M. H. (2019). Pengaruh Latihan Kekuatan Jari-Jari tangan Terhadap Peningkatan Kemampuan Passing Atas Dalam Permainan Bolavoli. *Journal Sport Area*, 4(1), 230–239.
<https://journal.uir.ac.id/index.php/JSP/article/view/2349>
- Sulastio, A. (2018). Pengaruh Metode Latihan Interval Ekstensif dan Intensif Terhadap Prestasi Lari 400 Meter Putra Atlet PASI Riau. *Journal Sport Area*, 1(2), 1–9.
<https://doi.org/10.30814/sportarea.v1i2.382>
- Warni, H., Arifin, R., & Bastian, R. A. (2017). Pengaruh Latihan Daya Tahan (Endurance) Terhadap Peningkatan Vo_{2Max} Pemain Sepakbola. *Multilateral Jurnal Pendidikan Jasmani Dan Olahraga*, 16(2), 121–126.
<https://doi.org/10.20527/multilateral.v16i2.4248>
- Zulfahri, & Melinda, C. (2019). Metode Practice Style dan Guided Discovery Style Serta Keterampilan Teknik Dasar Atlet Bulutangkis. *Prosiding SENFIKS (Seminar Nasional Fakultas Ilmu Kesehatan Dan Sains)*, 1(1), 28–37.
- Zulfahri, Z. (2018). Tingkat Kemampuan Daya Tahan Jantung dan Pernafasan Mahasiswa Pendidikan Olahraga dan Kesehatan Universitas Pasir Pengaraian. *Gelandang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga (JPJO)*, 3(1), 96–101.
<https://doi.org/10.31539/jpjo.v3i1.852>



Efforts to Improve Student Learning Outcomes Sprint Running Through Traditional Games (Gobak Sodor)

Aprillia Maharani Putri*, Leni Apriani

Aprillia Maharani Putri, Universitas Islam Riau, Jl. Kaharuddin Nasution, No 113, Pekanbaru, Riau, 28284, Indonesia

e-mail: aprilliamaharani30@student.uir.ac.id¹, leniapriani@edu.uir.ac.id²

Abstrak

This study aims to determine the increase in student learning outcomes Sprint Running through traditional games (Gobak Sodor). This research was carried out in the 2022/2023 school year. The form of this research was classroom action research. The research subjects were 37 students in class VIII F of MTs Al-Muttaqin Pekanbaru. This research technique is total sampling. The data analysis technique uses a performance test, namely doing Sprint Running practice, then the test results are assessed. From the implementation of the first cycle, the results were 26 students who achieved the KKM score (70%) and 11 students who had not reached the KKM score (30%), followed by the implementation of the second cycle, the results increased with a total of 37 students achieving the KKM score (100%). Thus it can be concluded that there is an increase in student learning outcomes in sprinting through traditional games (gobak sodor) at Mts Al-Muttaqin Pekanbaru with an increase of (100%).

Keywords: Learning Outcomes, Sprint Running, and Traditional Games

corresponding author: aprilliamaharani30@student.uir.ac.id

Artikel Info:

Submitted: 28/08/2022

Revised: 29/09/2022

Accepted: 30/11/2022

Published: 30/11/2022

How to Cite: Putri, A, M., Apriani, L. (2022). Efforts to Improve Student Learning Outcomes Sprint Running Through Traditional Games (Gobak Sodor). *Journal Coaching Education Sports*, 3(2), 157-164
<https://doi.org/10.31599/jces.v3i2.1511>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

Physical education is a process of systematic interaction between students and the environment which is managed through effective and efficient physical development toward the formation of a complete human being (Diana Darmawati et al., 2017). Physical education must meet the different needs of children. Because each child has different physical, mental, and social characteristics (Setiawan et al., 2020).

According to (Gazali et al., 2019) Education basically functions to instill good character values, because good character traits are capital for humans to become a nation capable of realizing a safe and prosperous life. A nation will survive as long as they still have good character, if the good character has disappeared from them then it will also disappear. From there, you can get an idea of how important it is to instill character values in humans.

Learning physical education, of course, has an output in the learning process, namely good learning outcomes. In general, it can be defined that learning outcomes are student self-assessments and changes that can be observed, proven, and measurable in the abilities or achievements experienced by students as a result of learning experiences (Sari, 2019). (Nurhasanah & Sobandi, 2016) revealed that learning outcomes can describe students' abilities

after what they know and learn. Furthermore, student learning outcomes are divided into five categories, namely verbal information, intellectual skills, motor skills, attitudes, and cognitive strategies (Muharto et al., 2017).

(Apriani et al., 2021) explained that traditional sports are sports or games that are inherited and developed in society and serve as a cultural tradition. Traditional sports are a form of physical activity that is easy and inexpensive to do and provides a sense of joy/pleasure (Alaska & Hakim, 2021).

Traditional games are games played by junior high school-level children (Gustin, 2020). The place to play is usually anywhere in the open, using the body as a medium, or surrounding objects such as stones, wood, and so on. Based on the observations made by researchers at MTS Al-Muttaqin Pekanbaru, shows that students' ability to do sprints is still low. This is due to the teaching factor which is monotonous and does not focus on explaining to students how the actual sprint is carried out. So that it affects student learning outcomes, namely the low student scores seen in the minimum completeness criteria (KKM) set by schools for physical education subjects is ≤ 75 .

According to (Henjilito, 2017) The athletics branch consists of several numbers, namely walking, running,

jumping, and throwing. Running consists of short-distance running, middle-distance running, long-distance running, and marathons. Short-distance running has running numbers including running 50 meters, running 100 meters, running 200 meters, and running 400 meters.

On this occasion, there will be a renewal of learning everyone doesn't want boredom in their life. Something boring is something that is not fun. People would prefer it if life was filled with renewal in a positive sense. Just like when teaching and learning activities take place, it is very important to apply teaching media, so that it cannot lead to boredom for both students and teachers, and learning does not turn into watching. Of the many teachers who teach, many do not use media, it will bore students, reduce student attention, become sleepy, and as a result, teaching and learning objectives are not achieved. In this case, the teacher needs media in teaching

students. Because of the many factors that affect the low interest of students in sports.

B. Methods

The form of this research is Classroom Action Research, the research subjects for class VIII F students of Mts Al-Muttaqin Pekanbaru totaling 37 students. The sampling technique is total sampling. The data analysis technique uses a performance test, namely doing Sprint Running practice, then the test results are assessed.

C. Result and Discussion

Result

Based on the first cycle consists of meetings and repeated cycles. In the cycle, repetition was held at the second meeting, at the first meeting the researcher only wanted to see students' absorption of the material being taught and whether students could respond or not to this material by using traditional games (gobak sodor). The results in cycle I am in the table below.

Table 1. Score intervals for class VIII F students at Mts Al-Muttaqin Pekanbaru Cycle I

Assessment	Criteria	Value Frequency	Percentage
91 – 100	Very good	-	-
80 – 90	Well	15	40 %
70 – 79	Enough	11	30 %
60 – 69	Not enough	7	19 %
< 60	Very less	4	11 %
Number of students who completed		26	70 %
Total students		37	100 %

Source: 2022 Research Results

From the table above, it can be explained that students who get grades in the good category are 15 students with a percentage of 40%, students who get sufficient scores are 11 students with a percentage of 30%, students who get fewer scores are 7 students with a percentage of

19%, and students who get grades very less namely 4 students with a percentage of 11%. Based on the results above, 26 students complete with a percentage of 70%, and students do not complete there are 11 students with a percentage of 30%. This can be presented in the graph as follows:

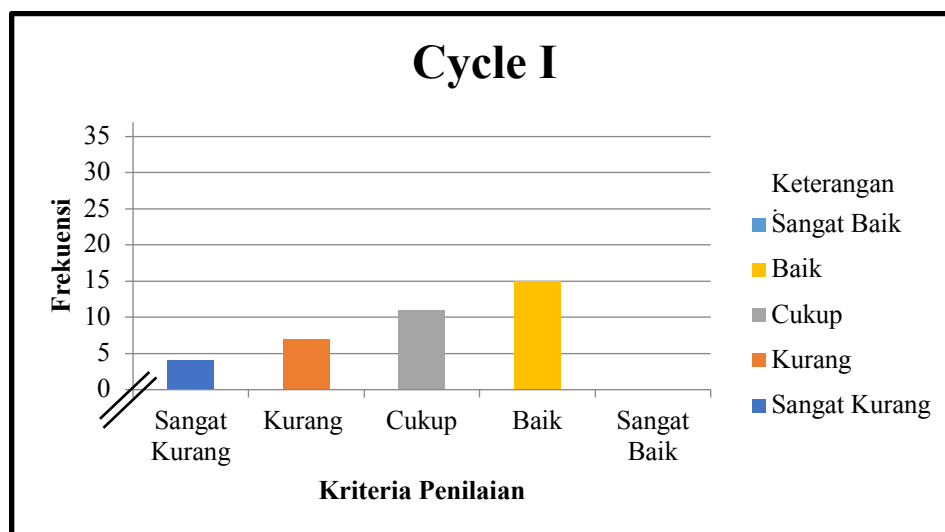


Figure 1 Assessment of Cycle I Sprint Running

Source: 2022 Data Processing Results

Based on the second cycle consists of the third and fourth meetings and one repetition of the cycle. In cycle II repeats were held in the fourth meeting. At the third

meeting the researchers improved the technique of sprinting through fun traditional games (gobak sodor) so that

students could produce maximum scores.

The results in cycle II are in the table below

Table 2. Interval of Sprint Running Values for Class VIII F Mts Al-Muttaqin Pekanbaru Cycle II

Assessment	Criteria	Value Frequency	Percentage
91 – 100	Very good	4	11 %
80 – 90	Well	29	78 %
70 – 79	Enough	4	11 %
60 – 69	Not enough	-	-
< 60	Very less	-	-
Number of students who completed	26	37	
Total students	37	37	

Source: 2022 Research Results

In the table above, it is explained that the completeness of students in cycle II with the very good category is 4 students with a percentage of 11%, the good category is 29 students with a percentage of 78%, and the sufficient category is 4 students with a percentage of 11%. So in

cycle II there was an increase in the results of the basic sprint technique through traditional games (gobak sodor) which was 100%. Based on the results above, there were 22 students who passed and students who did not complete. These results are presented in the graph as follows:

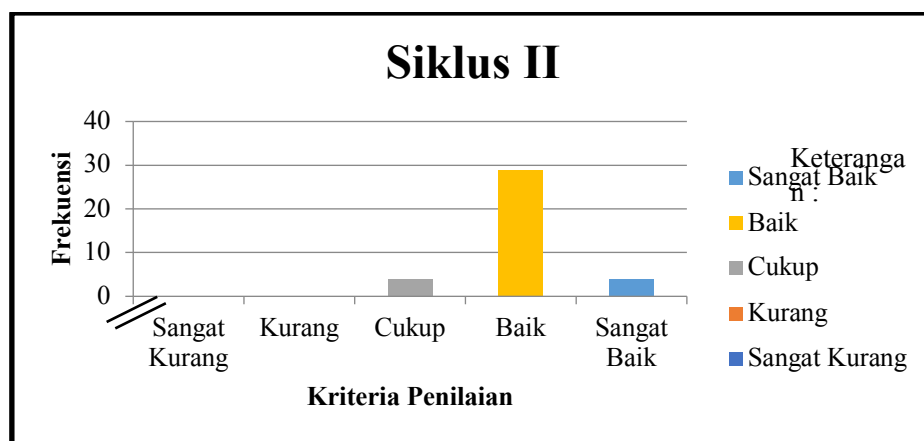


Figure 2 Assessment of Cycle II Sprint Running

Source: 2022 Data Processing Results

The data obtained starting from the initial test, cycle I, and cycle II experienced a significant increase, in cycle I there were

26 students who completed with a percentage of 70% and in cycle II there were 37 students who completed with a

percentage of 100%.

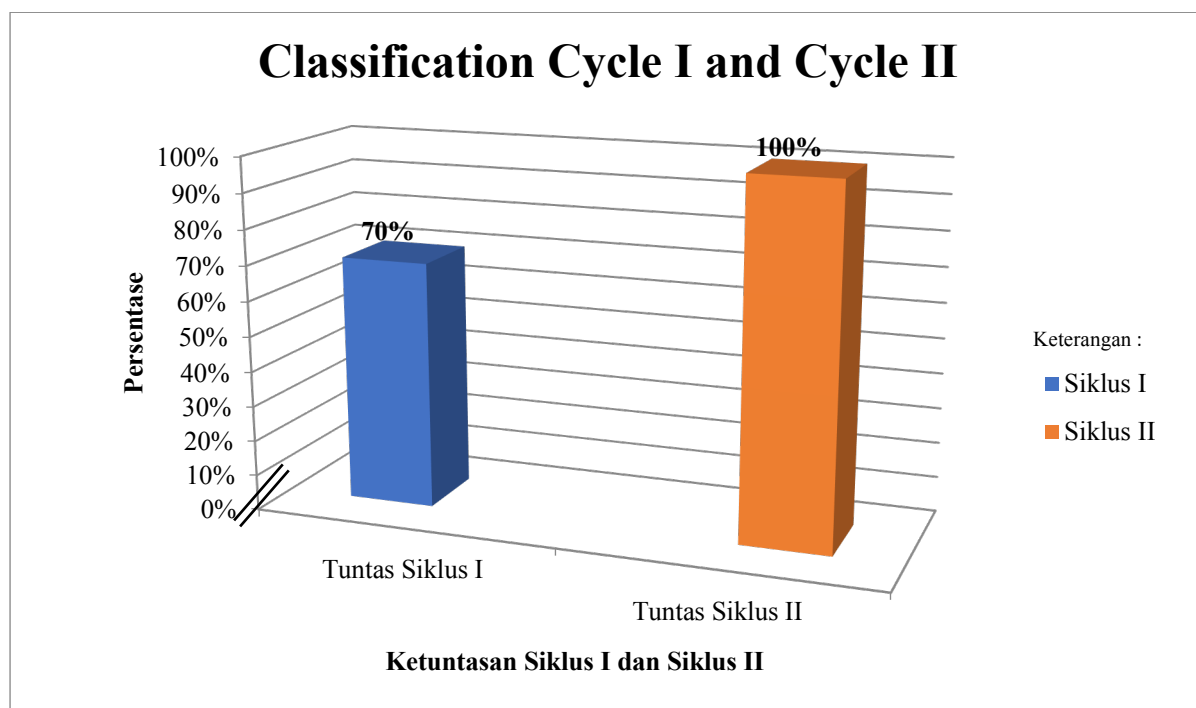


Figure 3 Assessment of Cycle III Sprint Running

Source: 2022 Data Processing Results

Discussion

Efforts to improve the learning outcomes of Sprint Running students through traditional games (gobak sodor) in class VIII F students of Mts Al-Muttaqin Pekanbaru have shown improvement. This increase can be seen from the results of the study which showed that the average cycle I was 70% increased in cycle II 100%. The number of students who completed the first cycle was 26 students with a completeness percentage of 70% and increased in the second cycle to 37 students with a good category of 100% completeness percentage. The results of this study are relevant to research that has been conducted by (Hidayat et al., 2018) Games are one of the

things that can help build relationships with children, which is called the concept of play therapy, which are techniques that contribute positively to mental, emotional, social, and other developmental aspects with the intention of healing which previously could be seen through psychological analysis.

Furthermore (Aryati, 2019) The benefits of traditional games are that they have many good impacts on children's development. Every traditional game has values that can be utilized in developing student motivation in various aspects, especially in physical education which can increase physical endurance. Several aspects that can be developed include physical-motor,

cognitive, language skills, social-emotional, art and creativity, and moral and religious values.

Then research conducted by (Nurohman & Widiyatmoko, 2019) concluded that in large-scale research, an average product analysis score was obtained by experts with a total assessment of 85% in the "Good" category with aspects affective 93%, cognitive aspects 80% and

D. Discussion

Based on the results of research that has been done in cycle I that in the good category there are 15 students with a percentage of 40%. In the sufficient category, there are 11 students with a percentage of 30%. In the lacking category, there are 7 students with a percentage of 19%. And in the very less category, there are 4 students with a percentage of 11%. Then in cycle II in the very good category, there were 4 students with a percentage of 11%. In the good category, there are 29 students with a percentage of 78%. In the student category, there are only 4 students with a percentage of 11%. The number of students who completed the first cycle was 26 students with a percentage of 70% incomplete, which increased in the second cycle to 37 students with a percentage of 100% in the good category.

E. Acknowledgements

The author would like to thank the

psychomotor aspects 83%. Based on the results of the study, it can be concluded that the development of the gobak sodor game model in traditional game learning can be used in physical education subjects and can be used as an alternative physical education model and physical education teachers should be more creative and innovative in accordance with the expected goals.

supervisor who has guided me so that this article can be completed. don't forget to thank the UNIMED altet community who are willing to be samples of this research.

F. Conflict of Interest

No conflict of interest

Reference

- Alaska, A., & Hakim, A. A. (2021). Analisis Olahraga Tradisional Lompat Tali dan Engklek Sebagai Peningkatan Kebugaran Tubuh di Era New Normal. *Jurnal Kesehatan Olahraga*, 09(01), 141–150. <https://ejournal.unesa.ac.id/index.php/jurnal-kesehatan-olahraga/article/download/40928/36256>
- Apriani, L., Sari, M., & Alpen, J. (2021). Studi Eksperimen Pada Unit Kegiatan Mahasiswa Petanque Universitas Islam Riau: Meningkatkan Kesegaran Jasmani Melalui Permainan Hadang dan Bentengan. *Jurnal MensSana*, 6(1), 50–55. <https://doi.org/10.24036/menssana.06012021.19>
- Aryati, V. A. (2019). Pengaruh Permainan Tradisional Terhadap Hasil Belajar Lari Jarak Pendek Siswa SMP Negeri 7 Kota Sukabumi. *Indonesia Sport Jurnal*, 2(2), 39–48.

- Diana Darmawati, T., Rahayu, A. R., & R.C. (2017). Leadership Guru Pendidikan Jasmani Olahraga dan Kesehatan di SMP Ogan Komerling Ulu Timur Sumatera Selatan. *Journal of Physical Education and Sports*, 6(2), 108–116. <https://journal.unnes.ac.id/sju/index.php/jpes/article/view/17359>
- Gazali, N., Cendra, R., Candra, O., Apriani, L., & Idawati, I. (2019). Penanaman Nilai-Nilai Karakter Peserta Didik Melalui Ekstrakurikuler Pramuka. *Aksiologi: Jurnal Pengabdian Kepada Masyarakat*, 3(2), 201. <https://doi.org/10.30651/aks.v3i2.1898>
- Gustian, U. (2020). Permainan tradisional: suatu pendekatan dalam mengembangkan physical literacy siswa sekolah dasar. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 6(1), 199–215. https://doi.org/10.29407/js_unpgri.v6i1.14252
- Henjilito, R. (2017). Pengaruh Daya Ledak Otot Tungkai, Kecepatan Reaksi dan Motivasi terhadap Kecepatan Lari Jarak Pendek 100 Meter pada Atlet PPLP Provinsi Riau. *Journal Sport Area*, 2(1), 70–78. [https://doi.org/10.25299/sportarea.2017.vol2\(1\).595](https://doi.org/10.25299/sportarea.2017.vol2(1).595)
- Hidayat, N. R., Sudirjo, E., & Rukmana, A. (2018). Pengaruh Penerapan Permainan Tradisional Bebentengan Terhadap Motivasi Belajar Siswa Dalam Mengikuti Pembelajaran Lari Sprint. *SpoRTIVE*, 3(1), 381–390.
- Muharto, Hasan, S., & Ambarita, A. (2017). Penggunaan Model E-Learning Dalam Meningkatkan Hasil Belajar Mahasiswa Pada Materi Microprocessor. *IJIS - Indonesian Journal On Information System*. <https://doi.org/10.36549/ijis.v2i1.26>
- Nurhasanah, S., & Sobandi, A. (2016). Minat Belajar Sebagai Determinan Hasil Belajar Siswa. *Jurnal Pendidikan Manajemen Perkantoran*, 1(1), 128. <https://doi.org/10.17509/jpm.v1i1.3264>
- Nurohman, M., & Widiyatmoko, F. A. (2019). Implementasi Permainan Tradisional Untuk Meningkatkan Keaktifan Gerak Siswa. *Jendela Olahraga*, 4(1), 61–65. <https://doi.org/10.26877/jo.v4i1.3028>
- Sari, N. A. N. (2019). Pengembangan Media Pembelajaran Senam Artistik Gerak Handspring Pada Meja Lompat. In *Universitas Negeri Yogyakarta*.
- Setiawan, A., Yudiana, Y., Ugelta, S., Oktriani, S., Budi, D. R., & Listiandi, A. D. (2020). Hasil Belajar Pendidikan Jasmani dan Olahraga Siswa Sekolah Dasar: Pengaruh Keterampilan Motorik (Tinggi) dan Model Pembelajaran (Kooperatif). *TEGAR: Journal of Teaching Physical Education in Elementary School*, 3(2), 59–65. <https://doi.org/10.17509/tegar.v3i2.24513>



Preservation of Traditional Sports of Geudeu-Geudeu Wrestling With Modification of Match Rules in the Pidie Jaya Community of Aceh

Edi Safwan*, Naimatul Jamaliah, Zulfikri

Universitas Sains Cut Nyak Dhien, Jl. Prumnas No.45 PB Seuleumak. Langsa Baro. Kab. Langsa. 24415, Indonesia.

e-mail: 3na1su@gmail.com

Abstract

The growth of traditional sports begins with daily habits with various activities in the form of movements towards a game which contains elements of the art of sports and social values that exist throughout Indonesia. The aim of the study was to modify the rules of the traditional sport of geudeu-geudeu wrestling. The research method used is research and development (R & D) with the stages of the ADDIE method, namely: analyze, design, develop, implement, evaluate. The research instruments were questionnaires and interviews containing statements related to the modification of the traditional sport rules of geudeu-geudeu wrestling. The research subjects were geudeu-geudeu trainers and 10 youths in Pidie Jaya Regency. Data analysis by looking for the magnitude of the relative frequency or in the form of a percentage. The results of this study indicate that there are four alternative answers chosen by respondents, namely 62.23% strongly agree, 34.24% choose agree, and 3.53% disagree, with the modification of the geudeu-geudeu martial arts regulations. Youth 60.02% strongly agree, 36.55% agree, 3.43% disagree with the modification of the traditional sport rules of geudeu-geudeu wrestling. Geudeu-geudeu and youth coaches 60.12% strongly agreed, 35.39% agreed with the development of the traditional sport regulations of geudeu-geudeu wrestling, and 4.49% disagreed with the modification of the traditional sport rules of geudeu-geudeu wrestling.

Keywords: traditional sports, Geudeu-geudeu, module

corresponding author: 3na1su@gmail.com

Artikel Info:

Submitted: 24/09/2022 Revised: 23/11/2022 Accepted: 29/11/2022 Published: 30/11/2022

How to Cite: Safwan, E., Jamaliah, N., Zulfikri. (2022). Preservation of Traditional Sports of Geudeu-Geudeu Wrestling With Modification of Match Rules in the Pidie Jaya Community of Aceh. *Journal Coaching Education Sports*, 3(2), 165-170. <https://doi.org/10.31599/jces.v3i2.1535>

Author's Contribution: Author's Contribution: a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

The growth of traditional sports stems from daily habits with various activities in the form of movements towards a game that contains elements of sports art and social values found throughout Indonesia. Traditional sports are one of the community activities carried out by the Indonesian nation, as a game that can generate or bring satisfaction, happiness, and health as well as pleasure (Alaska & Hakim, 2021). Traditional sports will also add various positive knowledge to anyone who does it (Nurohman & Widiyatmoko, 2019). We have many types of traditional sports which are the nation's cultural diversity and come from various regions in Indonesia. Therefore, traditional sports require serious and continuous management and development so that apart from being a sport they can also be developed as an object of attraction for tourists in the area and can increase the country's foreign exchange and raise the name of the nation in the world (Aryati, 2019).

In the current global era, the fading of traditional sports is nothing new anymore. The replacement of traditional sports due to globalization is due to a lack of public awareness of the importance of preserving local games or traditional sports in

everyday life (Hidayat et al., 2018). Now people think that traditional sports can be replaced with more popular martial arts sports such as judo, taekwondo, karate, wrestling, and so on (Ashari, 2019). Therefore, in traditional sports there is a need for coaching and development in a better direction, it also gives an illustration that traditional martial arts sports in the regions have the opportunity to form a good national personality and need to be modified by the times.

One of the people's game sports that must be developed is the traditional sport in the province of Aceh, namely the geudeu-geudeu martial arts, this can be seen from the enthusiasm of the people who want to participate in competing and witnessing geudeu-geudeu matches in the Pide Jaya district (Pide Jaya Regency). (Sabaruddin, 2019). Traditional geudeu-geudeu sports games are the same martial arts as other martial arts, it's just that the forms and systems in matches are different (Sabaruddin, 2019). Usually, the geudeu-geudeu martial arts competition is held after the rice harvest season, coinciding with the full moon arriving, this has become a tradition for this activity, also on birthdays and celebrations (Sabaruddin, 2019).

Due to the lack of clarity in the competition rules which guide the implementation of the competition and there is often a feeling of anxiety about doing geudeu-geudeu martial arts because matches contain movements or elements that are dangerous, they are less attractive to the public. Therefore, it is necessary to revise the regulations which are considered to contain techniques or movements that result in injury or harm, and the need to change the rules so that people are more motivated and happy and want to play geudeu-geudeu. The reality on the geudeu-geudeu sports field is that in the refinement of the rules it has not been socialized in a match. In this case, the author tries to socialize the modified rules for geudeu-geudeu martial arts

B. Method

The research method used in this research is Research and Development (R & D) ADDIE type. The research and development method is a process of developing new products or improving existing products. Research and development are used to develop and validate a product (Karisman & Supriadi, 2022). Based on this opinion, research and development is a series of steps in developing, creating, or perfecting a product.

The stages in the ADDIE method are:

analyze (analyze) identify gaps by conducting needs analysis, design (design) design appropriate research strategies and testing methods, develop (develop) produce and validate products, implement (implement) product trials, evaluate (evaluate) assess product quality.

C. Result and Discussion

Result

Based on the results of research on modifications to the regulations for the traditional sport of geudeu-geudeu wrestling in Pidie Jaya Regency in 2022, the following discussion can be carried out guided by the research objectives that have been formulated previously: for the playing field, more than half of the coaches and youth stated that they strongly agreed to modify that is not only played in the fields when the harvest season arrives but can be played indoors and open fields. Match time can be adjusted in the afternoon or evening, the length of the game, and the number of rounds in a match. Modification of player equipment such as clothes, belts, gloves, head protectors, and protective gear as well as weight categories. Only a very few coaches and youths disagree about the modification of the traditional sport of geudeu-geudeu wrestling, which essentially avoids movements that endanger players and can be accepted by all levels of society.

Discussion

The form of the geudeu-geudeu game must be modified so that it is not monotonous with various rules that are considered dangerous, regarding seats or corners and preparing tueng crew players and pok crew by each predetermined team or corner, the red corner prepares one person according to the class to step forward to the middle of the field, swing their arms while crossing their fingers defiantly, and approach the blue corner area and the middle of the field in a 3-meter circle is called "Awak Tueng". Then the blue corner is 2 people in the same class, who enters the arena, when there is already a code from the tueng crew, namely by clapping hands, stepping while holding hands, approaching the opponent's area or the red corner to attack, and trying to drop or slam the opponent to touch the floor is called " Pok Crew." If during an attack the handrails are released, then one of the team members must stop or be caught by the referee, and the other player is allowed to attack during the remaining 2 minutes. Tueng crew are allowed to slam and hit predetermined targets. The target for hitting is the front and back of the body starting from under the neck or shoulders to the navel. The peubla/referee crew consists of 2 people, are outside the 3-meter circle line, and are ready to separate if things that are considered outside the rules or conditions

that have been set occur. A geudeu-geudeu referee must be able to see and analyze every player who is competing, whether the fighter is hitting professionally or emotionally. Because it is between the professional and the emotional fighter that the referee plays a role in determining when a fight must be stopped.

Modification of the general provisions for your tueng and pok crew after each round you have to open the sash swinging up and down. Players are required to weigh themselves before the game starts. Weighing is carried out only once during the match. The participants' indicators (weight and age) were assessed by many trainers and youth, and more than half agreed.

Before the start of the game, instructions are given, equipment checks and lots and respects are given to the audience. Each team must correspond to a weight category. The tueng crew and the pok crew for one class consist of 3 people and 1 reserve. After the match, each party is required to shake hands in a match, each class gets 6 matches (3 times tueng and 3 times poke), and each player gets a turn to be tueng crew once and pok 2 times. The decision of the winner determined by the judges and the jury is absolute and cannot be contested.

Indicators of modifying prohibition rules to prevent injury and maintain player

safety so that they compete with fair play, assessment indicators must be adjusted to the form of attack of the group crew when dropping opponents and tueng crew must also know how to dodge, punch, and drop challenger techniques. Indicators of violations that are considered light and heavy must be given a penalty according to the violation committed.

Modifications related to judges, referees, and judges are sacred in referring to a match because they are the people who are responsible for the smooth running of a match or championship, this must have provisions governing it and solving problems if an incident occurs. already outside the provisions, meaning that every player who takes part in the match must maintain the rules contained in the traditional sport of geudeu-geudeu wrestling itself if you win, don't mock or insult your opponent or things that lead to a negative direction. This is an important factor in sports, that with sports one's friends will increase and not vice versa.

The results of distributing the questionnaire to geudeu-geudeu and youth coaches in Pidie Jaya Regency. More than half stated that they strongly agreed, less than half agreed with the modifications to the rules of traditional geudeu-geudeu wrestling, and very few stated that they disagreed with the modifications to the

rules of traditional geudeu-geudeu wrestling. This shows that the existing regulations regarding geudeu-geudeu must be changed or modified so that geudeu-geudeu can develop.

D. Conclusion

Based on the results of data analysis and discussion of research by geudeu-geudeu coaches and youth regarding modifications to geudeu-geudeu regulations, it can be concluded that: The geudeu-geudeu game has several modified indicators that can provide positive meaning and understanding for players and the development of the geudeu-geudeu sport itself. There are eleven indicators and ninety-two statement items from the modification variables of the geudeu-geudeu martial arts regulations.

The results of the analysis show that there are four alternative answers chosen by the respondents, with the following details: geudeu-geudeu trainers more than half (62.23%) stated that they strongly agreed, less than half (34.24%) chose to agree, very little (3.53%) stated that they did not agree with the modification of the rules for the traditional sport of geudeu-geudeu wrestling. Youth, more than half (60.02%) stated that they strongly agreed, less than half (36.55%) agreed, and very few (3.43%) disagreed with the modification of the rules for the traditional sport of geudeu-geudeu

wrestling. The geudeu-geudeu and youth coaches stated that more than half of (60.12%) strongly agreed, less than half (35.39%) agreed with the modification of the traditional geudeu-geudeu wrestling sport regulations, and very little (4.49%) disapproved of the modification of the regulations for the traditional sport of geudeu-geudeu wrestling.

E. Acknowledgements

The authors thank the Ministry of Education, Culture, Research and Technology for providing PDP grants in 2022. Also, the authors thank Dispora Pidie Jaya Prov. Aceh which gave the research permit.

F. Conflict of Interest

The goal of submitting to the novice lecturer research grant journal in 2022.

Reference

- Alaska, A., & Hakim, A. A. (2021). Analisis Olahraga Tradisional Lompat Tali dan Engklek Sebagai Peningkatan Kebugaran Tubuh di Era New Normal. *Jurnal Kesehatan Olahraga*, 09(01), 141–150.
<https://ejournal.unesa.ac.id/index.php/jurnal-kesehatan-olahraga/article/download/40928/36256>
- Aryati, V. A. (2019). Pengaruh Permainan Tradisional Terhadap Hasil Belajar Lari Jarak Pendek Siswa SMP Negeri 7 Kota Sukabumi. *Indonesia Sport*

Jurnal, 2(2), 39–48.

- Ashari, M. A. (2019). Perbandingan Pengaruh Permainan Olahraga Tradisional Hadang, Terompah Panjang, Egrang terhadap Peningkatan Daya Tahan, Kecepatan, dan Keseimbangan pada Siswa Ekstrakurikuler SD Impres 1 Tenga Kabupaten Bima NTB. *Jurnal Penjaskesrek*, 6(2), 231–239.
- Hidayat, N. R., Sudirjo, E., & Rukmana, A. (2018). Pengaruh Penerapan Permainan Tradisional Bebenangan Terhadap Motivasi Belajar Siswa Dalam Mengikuti Pembelajaran Lari Sprint. *SpoRTIVE*, 3(1), 381–390.
- Karisman, V. A., & Supriadi, D. (2022). Volleyball passing model through game-based approach. *Journal Sport Area*, 7(1), 79–88.
[https://doi.org/10.25299/sportarea.2022.vol7\(1\).7708](https://doi.org/10.25299/sportarea.2022.vol7(1).7708)
- Nurohman, M., & Widiyatmoko, F. A. (2019). Implementasi Permainan Tradisional Untuk Meningkatkan Keaktifan Gerak Siswa. *Jendela Olahraga*, 4(1), 61–65.
<https://doi.org/10.26877/jo.v4i1.3028>
- Sabaruddin. (2019). Modifikasi Peraturan Olahraga Beladiri Geudeu-Geudeu. *Jurnal Sport Pedagogy*, 4(1), 35–39.
<https://doi.org/https://adoc.pub/queue/modifikasi-peraturan-olahraga-beladiri-geudeu-geudeu-sabarud.html>



The Effect of Push Up and Pull Up Exercises on Shooting Free Throw Results in Basketball Athletes in Jembrana Regency

Arya Tangkas Prasetya*, Ketut Addy Indrawan, Ni Gusti Ayu Lia Rusmayani

¹Prodi Pendidikan Jasmani, Universitas Triatma Mulya, Jalan Danau Batur, Bali, 82214, Indonesia

e-mail: aryaprasetya8825@gmail.com¹, putra.indrawan@triatmamulya.ac.id²,

lia.rusmayani@triatmamulya.ac.id³_dst

Abstrak

A shooting free throw is a shot awarded to a player to score, as a result of being distracted by an opposing player in an attempt on a field shot. To master it, systematic training is needed, one of which is push-up and pull-up exercises. This study aims to determine the effect of push-up and pull-up exercises on the results of shooting free throws for basketball athletes in the Jembrana Regency. This research was carried out using a quasi-experimental research method with a pretest and post-test approach with a control group design. The population of this study was basketball athletes in the PERBASI Region, Jembrana Regency, with a sample of 30 athletes. Measurements were carried out during the pretest and post-test, and the push-up and pull-up exercise program was carried out 3 times a week, which was carried out for 5 weeks. The results showed that: 1) Push-up and pull-up exercises affected the results of shooting free throw scores for basketball athletes in Jembrana Regency ($p = 0.000 < \alpha$); 2) There is a difference in the results of shooting free throws for basketball athletes who are given push-up and pull-up exercises compared to ball athletes who are only given conventional training ($p = 0.000 < \alpha$). From the results of this study, it means that push-up and pull-up exercises can increase free throw shooting scores by increasing the arm muscle strength of basketball athletes. Trainers can provide push-up and pull-up exercises to be able to improve the physical abilities of athletes so that they get achievements in the sport of basketball games.

Keywords: Athlete Training, Push Ups, Pull Ups, Basketball Game

corresponding author: aryaprasetya8825@gmail.com

Artikel Info:

Submitted: 06/10/2022

Revised: 23/11/2022

Accepted: 29/11/2022

Published: 30/11/2022

How to Cite: Prasetya, T, P., Indrawan, K, A., Rusmayan, N, G, A, L. (2022). The Effect of Push Up and Pull Up Exercises on Shooting Free Throw Results in Basketball Athletes in Jembrana Regency. *Journal Coaching Education Sports*, 3(2), 171-178. <https://doi.org/10.31599/jces.v3i2.1548>

Author's Contribution: Author's Contribution: a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

Sport is a form of individual and community education that prioritizes physical movements that are carried out consciously and systematically towards a higher quality (Hita, 2020). Sport in the modern era as it is now is increasingly becoming a basic need for every human being in the context of existence and placing oneself in a strategic position by the development and progress of the times. Sports can provide a foundation for forming a strong personality, a healthy and resilient soul, and creativity in dealing with dynamic change and competition (Hita et al., 2020).

The benefits of sports include training as an educational tool, a means of achieving achievements, livelihoods, cultural media, maintaining health, and a positive lifestyle among the community, with the main goal of forming whole individuals who are physically and spiritually healthy (Hita et al., 2021). The majority of countries pay attention to sports, because sports do not only function to simply get physical fitness, but sports can also contribute to shaping human character. These various goals and benefits are also found in one of the most popular sports, namely basketball.

The game of basketball is very

interesting and can be played by all age groups, besides that the players are also required to have playing skills, physical fitness, and high body strength. With more and more sports centers and more education in schools, as well as more and more sports facilities, this sport can be played by anyone. The game of basketball is an active game and solid teamwork. The game of basketball is much loved by boys and girls. Basketball is a big ball game that has complex movements/techniques, namely a combination of walking, running, jumping, and elements of strength, speed, and accuracy. The game is played by two teams, each consisting of five players, with the goal of each team to enter the ball into the opponent's basket to get a point, and prevent the other team from entering the ball to score a point (Saichudin & Munawar, 2019: 1). To determine the points in a basketball game, namely by how much the ball enters the hoop, the more balls enter, the more likely it is to win in this game. In scoring points, basketball players need technique, capable shooting skills, and good accuracy in the game of basketball. In addition to the cooperation of team members, each individual must have a good playing technique, one example of this technique is shooting or shooting (Adityatama, 2017).

The shooting technique in basketball games is a very important skill in basic technical basketball, in addition to passing, dribbling, defending, and rebounding which can give a player a great opportunity to score (Hardiono, 2018). Actually, shooting can cover the weaknesses of other basic techniques. There are various types of shooting movements in basketball games, such as shooting under the basket, lay up, shooting three points, medium shooting, and shooting free throws. One of the shots in a basketball game is a free throw (Malik & Rubiana, 2019).

Shooting free throws are shots that are awarded to a player to get a score, as a result of being disturbed by an opposing player in a field shot attempt (Apriansyah et al., 2018). The free throw is taken behind the free throw line without obstruction. Free kicks are very important because free kicks are one of the supports for victory in a match. Success in shooting does not appear by itself, but there are several factors that can support this success, one of which is the training factor (Nugroho, 2013). There are many ways or methods of conveying training material to increase free throw results so that students master the material being taught more quickly and can apply it to the right situation (Sari, 2018). Practice can help reduce shooting failures. In junior high school students, we can see

that the biggest failure in making free throws is not getting the ball into the hoop correctly. This is caused by errors in the free throw technique and the lack of ability of the hand muscles to contract when doing free throws. There are indications that the result of the shot by the player is because the player cannot estimate the strength when shooting the ball so the ball goes too far or does not reach the basketball hoop (Abady, 2020). This is caused by the lack of maximum hand muscle strength when shooting free throws, because when shooting, it is the hand muscles that play an important role, if the hand muscles are not trained, the shot will be far from the target (Khurrohman et al., 2021). Therefore, there must be the right training method to make the hand muscles trained and can reduce failures in shooting the right target ball.

B. Method

The location of research was carried out in the Dauhwaru field which is located on Jalan Ngurah Rai, Negara, Negara District, Jembrana Regency, Bali Province. When the research was carried out in the Even Semester of the 2022/2023 Academic Year. The type of research used in this research is the quasi-experimental method. The experimental method is a method that aims to determine the data obtained through a measurement process to obtain objective,

quantitative data, and the results can be processed statistically with the aim of how far the influence of push-up and pull-up exercises has on the ability to shoot free throws in basketball athletes. Jembrana district (Saputra et al., 2018).

The type of instrument used in assessing aspects of an athlete's ability is the assessment of psychomotor aspects based on the athlete's performance in performing the free throw shooting technique in a basketball game.

This study uses statistical analysis on the grounds that the data obtained in this study is quantitative data in the form of numbers because in this study it is the value of a test from the experimental group data that has been matched to each individual so to test the significance using the t-test with a short formula (short method) (Nugroho, 2013). The data obtained were processed using statistical techniques using the t-test formula for correlated samples, for hypothesis testing using a significance level of 5% and the degrees of freedom for the number of pairs reduced by 1, namely N-1.

C. Result and Discussion

The findings of the analysis results in this study were compared with the results of previous studies and relevant theoretical reviews.

4.3.1 The effect of push-up and pull-up

exercises on the results of shooting free throws in Jembrana District basketball athletes

The results of the analysis found that push-up and pull-up exercises had an effect on the results of shooting free throw scores for basketball athletes in the Jembrana Regency. This is evidenced by the increase in the free throw shooting measurement score between the pretest and post-test. This can be seen from the increase in the score scored by shooting free throws after doing push-up and pull-up training. These findings are supported by research conducted by Wahyudin and Muktarsyaf (2019) which proves that push-up and pull-up exercises can increase arm muscle strength in basketball athletes. In addition, Burhan and Herlina's research (2022) states that giving push-up and pull-up exercises to basketball athletes can affect their mastery of the chest pass technique. So it can be concluded that these two exercises can significantly improve the ability of basketball athletes to make shots, which comes from the physical improvement of their arm muscles.

Push-up and pull-up exercises have been shown to increase arm strength in basketball athletes. Muscle strength (power) can also be called explosive power to support the activities of each sport. According to Widiastuti (2011), power is a very important movement ability to support activities in every sport. Power can be called the ability to apply force in a short

time where the muscles provide the best possible momentum to the body to carry the desired distance (Ramdhan & Wimanadi, 2019). Meanwhile, Sukirno (2012) explained that arm strength is the ability of a group of arm and shoulder muscles to contract maximally to overcome or fight the load needed in a basketball game. In addition, strength is a very important element in sports activities, because strength is the driving force, and prevents injury (Oktavyani, 2021). Yenny et al. (2012), explained the arm muscles that play an important role including the trapezius, bicep, rhomboid, deltoid, and tricep finger muscles. So it can be concluded that muscle strength is very important for basketball athletes, especially when throwing a basketball during a match.

This research has scientifically proven that push-up and pull-up exercises can improve the performance of basketball athletes. However, this study has not compared push-up and pull-up exercises in different groups. Research conducted by Meirizal and Rusmana (2018) has proven that the method with push-up exercises is more effective than pull-up exercises in improving basketball chest pass abilities. Burhan and Herlina's research (2022) also states that push-up exercises provide a better increase in ability when compared to pull-up exercises. Push-up training is a

form of exercise that is well-known by various groups, so it is very easy for athletes to do push-ups. This push-up exercise does not require a large area and can be done indoors or outdoors. When compared to pull-up exercises, this exercise tends to be unusual to do because of the problem of the weight that has to be lifted, and the unfavorable condition of the single bar (Meirizal & Rusmana, 2018). In this study, researchers combined these two exercises with the aim of producing maximum muscle strength by combining exercises that focus on arm muscle strength, and it has been proven that the combination of these two exercises can have a significant effect on the physicality of basketball athletes.

4.3.2 Differences in the results of shooting free throws for basketball athletes who are given push-up and pull-up training and ball athletes who are only given conventional training.

The results of the analysis showed that there was a significant difference between the group that was given push-up and pull-up exercises when compared to the group that did conventional exercises, and it was proven that push-up and pull-up exercises gave a better free throw shooting score. The average post-test measurement results in the experimental group were higher than the control group. So it can be

concluded that the provision of push-up and pull-up exercises is better than conventional training in increasing free throw shooting scores in basketball games. Conventional training is adapted to the usual training program given during basketball practice.

Exercise is an activity to improve the quality of the function of the human body's organ systems so as to make it easier for athletes to perfect their movements (Mylsidayu & Kurniawan, 2015). Training is the process by which an athlete is prepared for the highest performance (Bompa & Haff, 2009). In general, the purpose of training is to help coaches, trainers, and sports teachers to able to apply and have conceptual abilities and skills in helping reveal the potential of athletes to reach peak performance (Mylsidayu & Kurniawan, 2015).

In this study, athletes who took part in the study carried out training for five (5) weeks. According to Bompa and Haff (2009: 47), there is a lot of evidence that supports the use of a training frequency of 2-6 weeks, but usually, it is 4 weeks where the load increases in the first 3 weeks in which there is an accumulation of fatigue, then followed by an unloading phase in the 4th week. In determining the frequency of practice one must really determine the limits of one's skills because after all, one's body cannot adapt faster than the limit of his skills. Based on this, in this study, the

frequency of research used was 3 times a week with a day's rest between training and the duration of the training was 5 weeks or 15 training times not included in the implementation of the pretest and post-test.

There are several factors that can affect the increase in muscle strength besides doing exercises. Nutrition is an important thing in the process of increasing leg muscle power. Nutrients are needed by the body because they have great benefits for human growth and development (Irianto, 2006). Nutritional needs must be met properly because the process of rapid growth in high activity can affect muscle strength (Almatsier, 2009). Therefore, this study has not been able to control the factors that can influence the results of the study apart from the given push-up and pull-up exercises. This is a limitation of this research.

D. Conclusion

Based on the results of research data analysis, it was concluded that push-up and pull-up exercises had an effect on the results of shooting free throw scores for basketball athletes in the Jembrana Regency. There are differences in the results of shooting free throws for basketball athletes who are given push-up and pull-up exercises compared to ball athletes who are only given conventional training.

E. Acknowledgements

Thanks to all parties who have helped in the completion of this article

F. Conflict of Interest

No Conflict of interest

Reference

- Abady, A. N. (2020). *Optimalisasi Hasil Belajar Shooting Pada Permainan Bola Basket Melalui Pembelajaran Yang Dimodifikasi Menggunakan Bola Plastik Pada Siswa Kelas Viii Smp Al-Hidayah Medan Tahun Ajaran 2018 / 2019*. 1–6.
- Adityatama, F. (2017). Hubungan Power Otot Tungkai, Koordinasi Mata Kaki Dan Kekuatan Otot Perut Dengan Ketepatan Menembak Bola. *JUARA : Jurnal Olahraga*, 2(2), 82–92. <https://doi.org/10.33222/juara.v2i2.37>
- Almatsier. (2009). *Prinsip Dasar Ilmu Gizi*. Gramedia Pustaka Utama.
- Apriansyah, F., Triansyah, A., & Hidasari, F. P. (2018). Hubungan Koordinasi, Keseimbangan Terhadap Hasil Belajar Shooting Basket Kelas VII SMP LKIA Pontianak. *Jurnal Pendidikan Dan Pembelajaran, Khatulistiwa, Universitas Tanjungpura*, 7(3), 1–9.
- Bompa, T. O., & Haff, G. G. (2009). Periodization: Theory and Methodology of Training. In *Champaign, Ill. : Human Kinetics*;
- Burhan, Z., & Herlina. (2022). Perbandingan Pengaruh Latihan Pull Up dan Push Up Terhadap Peningkatan Keterampilan Chest Pass Ekstrakurikuler Bola Basket. *Jurnal Ilmiah Global Education*, 1(1), 48–52. <https://doi.org/10.55681/jige.v3i1.168>
- Hadinata, K., Waluyo, W., & Giartama, G. (2010). *Pengaruh Latihan Tembakan Bertahap Terhadap Hasil Tembakan Bebas Satu Tangan di Atas Kepala Pada Siswa Putra Ekstrakurikuler Bola Basket SMP Negeri 1 Inderalaya Utara*. Universitas Sriwijaya.
- Hardiono, B. (2018). Efektifitas Model Latihan Kekuatan Badan Terhadap Keberhasilan Pemanjatan pada Olahraga Panjat Dinding untuk Pemanjat Pemula. *Jurnal Ilmu Keolahragaan*, 17(1), 50–57. <https://doi.org/10.24114/jik.v17i1.9963>
- Hita, I. P. A. D. (2020). Efektivitas Metode Latihan Aerobik dan Anaerobik Untuk Menurunkan Tingkat Overweight dan Obesitas. *Jurnal Penjakora*, 7(2), 135–142. <https://doi.org/10.23887/penjakora.v7i2>
- Hita, I. P. A. D., Ariestika, E., Yacshie, B. T. P. W. B., & Pranata, D. (2020). Hubungan Status Gizi Terhadap Tingkat Aktivitas Fisik PMI Selama Masa Karantina COVID-19. *Jurnal Menssana*, 5(1), 151–161. <https://doi.org/10.24036/MensSana.050220.07>
- Hita, I. P. A. D., Kushartanti, B. M. W., Ariestika, E., Widiyanto, & Nizeyumukiza, E. (2021). The Association Between Physical Activity and Self-Rated Health Among Older Adults. *Journal of Population and Social Studies*, 29, 450–458. <https://doi.org/10.25133/JPSSv292021.028>
- Irianto, D. P. (2006). *Panduan Gizi Lengkap Keluarga dan Olahragawan*. Penerbit Andi.
- Khurrohman, M. F., Marhaendro, A. S. D., Festiawan, R., & Hidayat, R. (2021).

- Small-sided games: alternative exercise to improve cognitive performance of youth futsal players. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 7(1), 37–50.
- Malik, A. A., & Rubiana, I. (2019). Kemampuan Teknik Dasar Bola Basket: Studi Deskriptif Pada Mahasiswa. *Journal of SPORT (Sport, Physical Education, Organization, Recreation, and Training)*, 3(2), 79–84.
<https://doi.org/10.37058/sport.v3i2.1238>
- Meirizal, Y., & Rusmana, R. (2018). Perbandingan Latihan Pull Up dan Latihan Push Up Terhadap Keterampilan Chest Pass BolaBasket. *Jurnal Keplatihan Olahraga*, 10(1).
<https://doi.org/10.17509/jko-upi.v10i1.16277>
- Mylsidayu, A., & Kurniawan, F. (2015). *Ilmu Keplatihan Dasar*. Alfabeta.
- Nugroho, S. P. A. (2013). *Pengaruh Latihan Shooting Free Throw Menggunakan Modifikasi Bola Terhadap Hasil Shooting Free Throw Pada Siswa Putra Peserta Ekstrakurikuler Bolabasket Smp Negeri 3 Ungaran Universitas Negeri Semarang Tahun 2013*.
- Oktavyani, T. (2021). Korelasi Otot Lengan Terhadap Kemampuan Chest Pass dalam Olahraga Basket. *Silampari Journal Sport*, 1(1).
- Ramdhan, Muchammad Sofyan. Wismanadi, H. (2019). Kontribusi Kelentukan Pergelangan tangan Kekuatan Power Otot Lengan terhadap Keterampilan Shooting Freethrow. *Jurnal Kesehatan Olahraga*, 7(2), 259–268.
- Saichudin, & Munawar, S. A. R. (2019). *Buku Ajar Bola Basket*. Wineka
- Media.
- Saputra, J., Syafrial, S., & Sofino, S. (2018). Pengaruh Latihan Push – Up Dan Latihan Pull – Up Terhadap Kemampuan Pukulan Lurus Olahraga Pencak Silat Pada Siswa Ekstrakurikuler Smp Negeri 1 Kota Bengkulu. *Jurnal Ilmiah Pendidikan Jasmani*, 2(1), 104–110.
<https://doi.org/10.33369/jk.v2i1.9194>
- Sari, V. I. P. (2018). Daya Tahan Kekuatan Otot Lengan dan Koordinasi Mata Tangan Dengan Ketepatan Tembakan Bebas Peserta Ekstrakurikuler Bolabasket Putri SMAN 1 Pekanbaru. *Jurnal Bola (Bersama Olahraga Laju Asia)*, 1(1), 23–33.
- Sukirno. (2012). *Dasar-dasar Atletik dan Latihan Fisik*. Unsri Press.
- Wahyudin, A., & Muktarasyaf, F. (2019). Pengaruh Latihan Push Up dan Latihan Pull Up Terhadap Kekuatan Otot Lengan Atlet Bola Basket Klub OGC (Ocean Generation Club) Kota Padang. *Jurnal Stamina*, 2(1), 381–390.
- Widiastuti. (2011). *Tes dan Pengukuran Olahraga*. PT Bumi Timur Jaya.
- Yenni, F. R., Ramadi, & Agust, K. (2012). Pengaruh Latihan Push Up Terhadap Hasil Memanah Jarak 30 Meter Atlet Panahan Putra PPLM Devisi Standar Bow. *JOMFKIP: Jurnal Online Mahasiswa Fakultas Keguruan Dan Ilmu Pendidikan*, 1(2), 1–10.



The Effect of Jigsaw Cooperative Learning Model on Learning Outcomes of Dribbling and Passing Using the Back of the Foot Football Game in Class VII Students of SMP

Ni Putu Anggreni*, I Wayan Repiyasa, Komang Ayu Krisna Dewi

Prodi Pendidikan Jasmani, Universitas Triatma Mulya, Jalan Danau Batur, Bali, 82214, Indonesia

e-mail: putuanggreni331@gmail.com¹, wayan.repiyasa@triatmamulya.ac.id²,

krisna.dewi@triatmamulya.ac.id³

Abstrak

This study aims to determine the effect of the jigsaw cooperative learning model on learning outcomes of dribbling and passing by using the instep of a soccer game in class VII students of SMP Negeri 1 Pekutatan. This type of research is quasi-experimental research. The population is all students in class VII A and VII B of SMP Negeri 1 Pekutatan for the 2021/2022 school year with a total of 66 students. The sample used random sampling. The research was conducted in twelve meetings. Learning outcome data is collected by means of objective tests. Data collection methods in the form of attitudes, knowledge and skills were then analyzed using the SPSS 16.0 For Windows program. The average dribbling learning result of the experimental group was 38.0373 while in the control group the average was -10.0876. The average passing learning result from the experimental group was 39.3394 while in the control group the average was -15.5548. The results of this study indicate that the jigsaw type cooperative learning model affects the learning outcomes of dribbling and passing

Keywords: *Jigsaw, Dribbling, Passing, Soccer*

corresponding author: putuanggreni331@gmail.com

Artikel Info:

Submitted: 06/10/2022

Revised: 23/11/2022

Accepted: 29/11/2022

Published: 30/11/2022

How to Cite: Anggraeni, N, P., Repiyasa, I, W., Dewi, K, A, K. (2022). The Effect of Jigsaw Cooperative Learning Model on Learning Outcomes of Dribbling and Passing Using the Back of the Foot Football Game in Class VII Students of SMP. *Journal Coaching Education Sports*, 3(2), 179-188. <https://doi.org/10.31599/jces.v3i2.1549>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

Sport is an activity that cannot be separated from everyday life. It has become commonplace when every individual does sports to maintain his fitness. The desire to maintain body condition to stay fit in activities is a special encouragement for each individual (Widodo, 2018). In this case, there are many kinds of goals for each individual by doing sports, according to their wishes and needs or a job demand. In this case, every individual does sports just for fun. Then do sports activities with educational purposes. In addition to doing sports to achieve a certain level of physical fitness and those who carry out certain sports activities achieve maximum performance by development (Bangun, 2019).

Sport is essentially an activity that aims to train or develop every aspect of the body (Sari et al., 2017). Besides that, by doing sports, physical fitness also increases, so that it supports carrying out long activities to the fullest. Many benefits can be obtained if you do regular and continuous exercise. Many types of sports can be done, and apart from getting pleasure from sports, they can also strengthen social relations (B. A. Kusuma & Setyawati, 2016). In principle, sports are divided into 3 parts, namely recreational sports, educational sports, and achievements. Sports achievement is the pinnacle of

achievement in sports because in this case, it is not only fun and fitness. In this case, one of the most popular forms of achievement sports worldwide is soccer (Asmawi et al., 2022). When discussing football, of course, every person in the world knows this sport.

The sport that is most popular and in demand among these groups is a team sport played by eleven players with ten players using their feet to play the ball and the goalkeeper using the whole body. According to (Alfi Hidayat, 2019) football is a game that requires a lot of energy, intelligence on the field boosts enthusiasm, as well as provides joy through togetherness in a team. In soccer there are several techniques, namely accompaniment techniques, kicking, controlling, catching, throwing, etc.

Football is a sports game that has been played for a long time in various countries, even though they use different terms (I. D. M. A. W. Kusuma, 2018). All of these games have the same goal, namely a game played by two teams, and the game from each team is trying to play the ball and keep the ball from being captured by the opposing team and trying to put the ball into the opponent's goal (Suantama et al., 2018). Football is an innovative game, namely a game that allows every player in a team or team that competes to attack to enter the opponent's defense area, and

every game in a team tries to put the ball into the opponent's goal to score or score and protect the goal from the opponent's attack. (Palmizal et al., 2020).

Goals are counted when the ball has completely crossed the goal line. Each player tries to enter the ball by passing, dribbling and shooting (Putranto & Andriadi, 2019). Apart from these methods, other ways can be done by players who do not carry the ball, such as finding space, helping and protecting players who are carrying the ball, and players from the opposing team who do not control the ball trying to grab the ball from opposing players by doing fighting body (body charge), talking, shadowing opposing players who do not carry the ball, closing empty spaces and closing space for shots towards a goal (Taufik, 2019). In the sports and health physical education curriculum unit at the junior high school level, several sports are indicators of student achievement.

One of them is that soccer is a sport that uses large balls and is played in teams, but in the learning process, the teacher may modify the game so that the learning process can run smoothly (Hartoto, 2018). For this reason, it is necessary to have an effective learning model that can be used by teachers so that students can improve their skills in these sports. Several

methods, models, and teaching styles that are often used by a teacher include command, divergent, and cooperative teaching styles, etc. Those are some of the methods, styles, and strategies commonly used by a teacher, especially physical education teachers. In physical education learning a teacher is required to be creative in using the right style, method, and teaching strategy, so that the enthusiasm of students in learning is quite high.

Therefore it is necessary to have an appropriate learning method or model. So the method used is the jigsaw cooperative learning model. (Setiawan et al., 2020) states that the jigsaw-type cooperative learning model is a learning model that focuses on student group work in the form of small groups. As revealed by (Hamzah et al., 2019) that the cooperative learning model of the jigsaw model is a cooperative learning model in which students learn in small, heterogeneous groups of 5-7 students and students work together with positive interdependence and are responsible independently. The reason for choosing the jigsaw-type learning model is because this outlining method is discussing and demonstrating the whole and implementation of learning that involves practice, so this learning model is very suitable to be applied in every lesson that requires demonstration, especially in

football sports with the aim that students can more easily digest and understand what the teacher says. Based on the results of my observations at Pekutatan 1 Public Middle School, showed that most of the VII students' learning outcomes in the physical education subject were still low. Out of 33 students, 10 students scored above the KKM, and 22 students scored below the KKM.

Student learning outcomes are still low, caused by students who play too much when they receive football material so students still have difficulty understanding football material. Apart from that, the reason for the researcher to take or carry out research at SMP N 1 Pekutatan, is because football achievements at SMP N 1 Pekutatan have not obtained maximum results so they want to apply a cooperative learning model to improve student skills. In addition, the use of learning models that are still not by the learning material causes the learning to be less attractive to students. From the problems encountered in the field, researchers are motivated to find solutions, in this case, the right learning models to solve existing problems, so that the right learning is to solve existing problems together and thoroughly. In connection with the problems that have been described previously. Based on the explanation above, to prove an experimental study with

the title, namely the effect of the jigsaw cooperative learning model on the learning outcomes of dribbling and passing using the instep in soccer games in class VII students of SMP Negeri 1 Pekutatan.

B. Method

The location of the research will be at SMP Negeri 1 Pekutatan which is located on Jln Denpasar Gilimanuk, Jembrana Regency. When the research was carried out in the even semester of 2022 with 12 meetings in each group. The type of research used in this research is Quasi Experiment.

Basically, this study aims to determine the effect of the jigsaw cooperative learning model on the learning outcomes of dribbling using Instep Football Games for students in the experimental group while the control group is given learning with the conventional model. The design in this study was the non-randomized control group pretest and posttest design.

External validity concerns the extent to which research results can be generalized. External validity in this experimental research includes interaction between subject selection and treatment, setting interaction with treatment, and historical interaction with treatment. The steps taken to control external validity are to do total sampling.

In this study, the data obtained was

based on the results of a basic technique assessment of soccer dribbling (dribbling using the instep). The data collection procedure was carried out by giving a pretest and posttest. Pretest before treatment and posttest after treatment. The test given to the experimental group and the control group is the same test.

C. Result and Discussion

Based on the table of normality test results, the distribution of data is normally distributed if the sig value is in the Kolmogorov Smirnov column ($p > 0.05$). The test results of the testers above on the Kolmogorov Smirnov column, the sig value in the experimental group was = 0.200 while the sig value in the control group was = 0.200, so the sig values in both groups in this study were normally distributed.

Based on the table of homogeneity of variance, both classes use a sig (Significant) value in Levene's test column for equality of variance. If the sig value > 0.05 , it means that there is no difference in variance between the experimental class treated with the jigsaw cooperative learning model and the control class treated with conventional learning models. The sig value for the Levene test for the two groups in this study was = 0.754 which is more than 0.05 so it can be concluded

that there is no difference in variance in the two groups or the variance of the data, so that the two classes are homogeneous.

The lack of cooperation between teachers and students and fellow students with one causes the learning process to not run optimally and maximally. The learning model used is monotonous and pays little attention to individual student abilities, even though the abilities of each individual are not necessarily the same, namely social background, level of achievement, and ability of each individual, so that appropriate learning innovation is needed so that PJOK learning outcomes can run according to the objectives. Based on the results of data analysis, it was obtained that there were differences in the learning outcomes of the basic techniques of dribbling and passing in soccer games between students who were given the jigsaw cooperative learning model and the conventional learning model. soccer game. In this study, each research group was given a different treatment, in which the experimental group was given the jigsaw cooperative learning model given by the researcher and the conventional group was given by the PJOK teacher. The jigsaw-type cooperative learning model is not only superior in helping students but this learning model can increase cooperation between students, interact between

teachers and students, increase creativity, thinking critically, a sense of responsibility between groups and friends, a confident attitude in guiding friends, and the ability to explain material or learning to groups.

Based on the observations of researchers when learning took place in the experimental group, learning was directed at paying attention to students' understanding of the basic techniques of dribbling and passing football in participating in learning activities. More positive student activity in studying the material in a study by discussing and exchanging ideas in groups makes the average score obtained by students in the experimental group greater than the average score obtained from the control group

The effect of the jigsaw cooperative learning model on learning outcomes has been proven through research conducted by:

Khoerul Mufti Priyanto Lack of variety in learning physical education makes students bored and not enthusiastic about taking lessons. Because of this, an interesting learning model is needed so that students become more enthusiastic about participating in Jigsaw Cooperative learning. The purpose of this study was to improve physical education learning outcomes by using the jigsaw type II cooperative learning model for fifth-grade

students at SDN Sambigede 03

Sumberpucung Malang. The results of the application of the jigsaw-type cooperative learning model in the initial conditions or pre-cycle results showed students' incompleteness in physical learning by 40%, then given treatment in cycles I and II using the jigsaw model experienced an increase in mastery reaching 57%, and in cycle II mastery reached 77 %

Agung Dwi Prasetya, The purpose of this study was to determine, analyze, and identify the significant effect of the jigsaw learning model on basketball dribbling skills at SMA Negeri 1 Rengasdengklok. There are three stages in this study, namely: pretest, treatment, and posttest. The pretest was carried out in both classes to find out the initial ability of basketball skills before getting treatment. After being given treatment, the researcher then conducted a posttest in both classes to find out whether there was an effect of the jigsaw learning model in the experimental class.

Researchers processed using the T-count formula and compared it with the T-table and the significance is less than 0.05. The results showed that the jigsaw learning model had a greater influence on the dribbling skills of Grade 11 SMA Negeri 1 Rengasdengklok with a T-count of 0.133 compared to a T-table of 0.148 with a significance of less than 0.05 of 0.00.

According to Muchammad Rizky Fajar, this study aims to determine the learning outcomes of class X students of SMA Negeri 1 Padang Sidempuan before and after applying the jigsaw cooperative learning model. This research is a classroom action research that consists of two cycles. The research population was all class X students of SMA Negeri 1 Padang Sidempuan in the 2015/2016 academic year. The sample selection was carried out using the cluster random class technique. The sample taken was one class taught using a jigsaw cooperative learning model. The instrument used is a test of learning outcomes in the form of multiple choice and observation. The results of the pre-test data analysis as the initial learning outcomes of students show that 12 students score ≥ 75 with a learning completeness percentage of 41.38%.

Learning carried out in the control group was carried out by applying conventional learning models, the conventional models applied in the control group guided students to be able to understand and practice the movements correctly. However, by using the lecture model in delivering teacher-centered learning material and there are still many less active students. This is different from learning in the experimental group which uses the cooperative learning model of the

jigsaw type of students who are taught through small groups led by the group leader or what is called the expert group. Then the researcher gives the learning material to the expert group, then the expert group will explain to the group about the material that has been submitted. This will increase the responsibility and cooperation between all group members to understand the material being taught so that it will involve the participation of all students. It was these factors that resulted in learning that took place in the experimental group getting a better response from students so that the average comparison of the effect of the jigsaw cooperative learning model on the experimental class dribbling was 38.0373 and in the conventional group -10.0876, while in the cooperative learning model on passing experimental class 39.3394 and in the conventional group -15.5548

From the description above, it shows that the jigsaw type cooperative learning model in learning dribbling and passing techniques has a positive effect on student learning outcomes. This study has the implication that there are differences in the learning outcomes of the basic techniques of dribbling and passing using the instep in soccer games which are taught using the jigsaw cooperative learning model using conventional learning models.

D. Conclusion

The results of the study that there was an influence of the jigsaw cooperative learning model on the learning outcomes of dribbling using the instep of class VII students of SMP Negeri 1 Pekutatan. Based on the data obtained sig (2-tailed) = 0.000 Then $P < 0.05$. These results are used as a basis for making decisions. The decision taken is to reject H_0 and accept H_a , which means that the learning outcomes of soccer taught with the jigsaw cooperative learning model are higher than the learning outcomes of soccer taught with conventional learning models. Learning to Pass Using the Back of the Feet in Grade VII Students of SMP Negeri 1 Pekutatan. Based on the data obtained sig (2-tailed) = 0.000 Then $P < 0.05$. it can be said that the jigsaw cooperative learning model has a higher influence than the conventional learning model.

The results of the study that there were differences in the learning outcomes of the jigsaw cooperative learning model with the learning outcomes using conventional learning models, that the difference in the average dribbling learning outcomes of the experimental group was 38.0373 while in the control group the average was - 10.0876. whereas the learning outcomes of passing the jigsaw cooperative learning model are higher than the conventional

learning model with the average difference in the experimental group being 39.3394 while in the control group the average is - 15.5548

E. Acknowledgements

Thanks to all parties who have helped in the completion of this article

F. Conflict of Interest

No Conflict of interest

Reference

- Alfi Hidayat, R. (2019). Pengaruh Metode Latihan Passing Permainan Sepak Bola Terhadap Hasil Belajar Passing Sepak Bola Menggunakan Kaki Bagian Dalam. *Jurnal Pendidikan Olahraga Dan Kesehatan*, 7(3), 331–335.
- Asmawi, M., Yudho, F. H. P., Sina, I., Gumantan, A., Kemala, A., Iqbal, R., & Resita, C. (2022). *Desain Besar Olahraga Nasional Menuju Indonesia Emas* (Issue April).
- Bangun, S. Y. (2019). Peran Pelatih Olahraga Ekstrakurikuler Dalam Mengembangkan Bakat Dan Minat Olahraga Pada Peserta Didik. *Jurnal Prestasi*, 2(4), 29. <https://doi.org/10.24114/jp.v2i4.11913>
- Hamzah, I., Ginanjar, A., & Setiawan, A. (2019). Pengaruh Model Pembelajaran Jigsaw Terhadap Hasil Belajar Passing

- Bawah Bola Voli. *Jurnal Kependidikan Jasmani Dan Olahraga*, 3(1), 58–63. https://ejournal.stkipnu.ac.id/public_html/ejournal/index.php/jkjo/article/view/58
- Hartoto, S. (2018). Pengaruh Latihan Piramida Descending dengan irama lambat dan cepat terhadap Kekuatan, Kecepatan, Daya ledak dan Hypertrophy Otot tungkai. *JOSSAE : Journal of Sport Science and Education*. <https://doi.org/10.26740/jossae.v2n2.p58-60>
- Kusuma, B. A., & Setyawati, H. (2016). Survei Faktor-Faktor yang Mempengaruhi Minat Olahraga Rekreasi Akhir Pekan di Alun-Alun Wonosobo. *Journal of Physical Education, Sport, Health and Recreations*, 5(2), 68–73. <https://doi.org/10.15294/active.v5i2.10737>
- Kusuma, I. D. M. A. W. (2018). Upaya Meningkatkan Hasil Belajar Dribble Sepakbola Melalui Model Pembelajaran Numbered Head Together (NHT) dan Media Audio Visual. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 4(1), 73–86. https://doi.org/10.29407/js_unpgri.v4i1.11940
- Palmizal, A., Munar, H., Muchlisin, A., & Pasaribu, N. (2020). Kemampuan Vo2max Atlet Sepakbola Ditinjau dari Latihan. *Journal Coaching Education Sports*, 1(1), 27–36. <https://doi.org/10.31599/jces.v1i1.83>
- Putranto, D., & Andriadi, A. (2019). Pengembangan Model Latihan Passing ADE Sepakbola. *SPORTIVE: Journal Of Physical Education, Sport and Recreation*, 2(2), 73. <https://doi.org/10.26858/sportive.v2i2.9514>
- Sari, R. M., Valentin, R. G., & Samosir, A. (2017). Upaya Meningkatkan Konsentrasi Melalui Latihan Relaksasi Atlet Senam Ritmik Sumut. *Sains Olahraga : Jurnal Ilmiah Ilmu Keolahragaan*, 1(1), 52–63. <https://doi.org/10.24114/so.v1i1.6132>
- Setiawan, A., Yudiana, Y., Ugelta, S., Oktriani, S., Budi, D. R., & Listiandi, A. D. (2020). Hasil Belajar Pendidikan Jasmani dan Olahraga Siswa Sekolah Dasar: Pengaruh Keterampilan Motorik (Tinggi) dan Model Pembelajaran (Kooperatif). *TEGAR: Journal of Teaching Physical Education in Elementary School*, 3(2), 59–65. <https://doi.org/10.17509/tegar.v3i2.24513>
- Suantama, P. A. B., Swadesi, I. K. I., &

-
- Sudarmada, I. N. (2018). Pengaruh Metode Latihan Wall Pass Dan Push and Run Terhadap Akurasi Passing Dalam Permainan Sepak Bola Pada Siswa Ssb Putra Mumbul Usia 10-13 Tahun. *Jurnal Ilmu Keolahragaan Undiksha*, 5(2).
<https://doi.org/10.23887/jiku.v5i2.14911>
- Taufik, M. S. (2019). Meningkatkan Teknik Dasar Dribbling Sepakbola Melalui Modifikasi Permainan. *Jurnal Maenpo: Jurnal Pendidikan Jasmani Kesehatan Dan Rekreasi*, 8(1), 26–36.
<https://doi.org/10.35194/jm.v8i1.914>
- Widodo, A. (2018). Makna Dan Peran Pendidikan Jasmani Dalam Pembentukan Insan. *Jurnal Motion*, 9(1), 53–60.
https://www.researchgate.net/publication/329442726_MAKNA_DAN_PERAN_PENDIDIKAN_JASMANI_DALAM_PEMBENTUKAN_INSAN_YANG_MELEK_JASMANIAHTER-LITERASI_JASMANIAHNYA



The Effectiveness of Corner Online Learning During a Pandemic

Sardiman¹, Didik Purwanto²

Pendidikan Jasmani Kesehatan dan Rekreasi, Universitas Tadulako, Indonesia¹

Email: Sardiman425@gmail.com, didik@untad.ac.id

Abstract

This study aims to describe the effectiveness of online learning during the COVID-19 pandemic in PJOK subjects. This study uses a quantitative descriptive research design with a one-shot case study approach using survey methods. Data analysis techniques using quantitative descriptive analysis with percentage data. The results showed that during the COVID-19 pandemic 100% of teachers continued to provide PJOK learning, 66.7% of teachers used online learning methods 22.2% of PJOK learning was by the lesson plan, and 66.7% according to the lesson plans but not coherently 66.7% used WhatsApp group learning media, 66.7 % of students enthusiastic and participating well in learning 77.8% of teachers working with parents of students so that the PJOK learning process continues 44.4% of teachers say learning is by lesson plans 77.8% assessment based on a collection of assignments and exams 88.9% of teachers say assessment on online learning is not effective and 88.9% of obstacles in PJOK learning are difficulty accessing the internet.

Keywords: Effectiveness, Learning Online , PJOK

corresponding author: Sardiman425@gmail.com

Artikel Info:

Submitted: 11/10/2022

Revised: 11/10/2022

Accepted: 29/11/2022

Published: 30/11/2022

How to Cite: Anggraeni, N, P., Repiyasa, I, W., Dewi, K, A, K. (2022). The Effectiveness of Corner Online Learning During a Pandemic. *Journal Coaching Education Sports*, 3(2), 189-200. <https://doi.org/10.31599/jces.v3i2.1571>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Introduction

In December 2019, the World Health Organization (WHO) was notified of the discovery of a new virus in China that put health systems worldwide on alert (Medeiros et al., 2021) and then quickly spread worldwide infecting millions of people (Picot et al., 2020). The 2019 Coronavirus (COVID-19) is highly contagious and is spreading rapidly around the world, leading WHO to declare a pandemic (Pérez-Campos Mayoral et al., 2020; Zu et al., 2020). At this time the world is being faced with an outbreak of Covid-19 which is causing certain symptoms known as Covid-19 disease which have hit all countries in the world including Indonesia. From various aspects of life, the education sector is one of those affected by the Covid-19 pandemic. The Covid-19 pandemic forced us to adapt to new habits in carrying out learning activities. One of the new habits is related to government policies, both related to implementation guidelines and technical guidelines for the education system. In these days marked by the fight against the SARS-CoV-2 pandemic also known as Covid-19/coronavirus disease 2019, procedures known as "social isolation" and "social distancing" have become the most effective protective measures. to reduce the impact of the spread and transmission

of this virus (Bijen & Ferman, 2020; Cearense, 2020). One of the operational guidelines and technical guidelines for the education system in Indonesia during the Covid-19 pandemic is the distance learning process (PJJ), which is carried out both offline (outside the network) and online (in the network). As a result, learning that used to be carried out face-to-face at school eventually shifted to each student's home. This was done so that the school community, teachers, education personnel, and students could avoid the threat of the Covid-19 pandemic. Infrastructure and facilities of all institutions in countries are organized to prevent epidemics, minimize learning losses as long as the epidemic continues, and ensure continuity of learning (Bijen & Ferman, 2020).

Online learning is a learning process that uses an internet-based interactive model. While offline learning is a learning process by lending or sending textbooks to students either through study groups delivered directly by teachers or school officials. Formally, distance learning (PJJ) is listed in a Circular (Kemendikbud Number 4 of 2020) concerning the Implementation of Education in the Emergency Period of Coronavirus Disease (Covid-19), which is then followed up with Circular Letter Number 15 of 2020 concerning Guidelines for Organizing

Learning from Home in the Emergency Period of the Spread of Covid-19. In developed countries, learning physical education during the pandemic was quite varied, for example in several European countries and the United States, as follows: in North Macedonia, the school year ended with online teaching and homeschooling. Different teachers use different forms such as online classes with live streams, recorded videos, assignments for students, projects, or just links to follow. In Hungary, weekly "movement diaries" are the most common method of motivating students to physical education. In Italy, teachers are invited to teach via online distance learning (Bijen & Ferman, 2020). Measures must be taken to prevent or reduce the contamination of at-risk students in face-to-face education (Majumder & Kenneth D. Mandl, 2020).

Physical Education is one of the subjects in schools and is a driving medium for training the development of motor skills, physical abilities, knowledge, sportsmanship, habituation to healthy lifestyles, and character building (mental, emotional, spiritual, and social) to achieve goals National education system (Law No. 20, 2003). School physical education has a distinct role in the acquisition and development of children's functional movement skills and physical competence

(Bergeron et al., 2015; Sollerhed et al., 2020). These factors are related to the concept of physical literacy, which is described as 'the motivation, self-confidence, physical competence, knowledge and understanding to value and be responsible for engaging in lifelong physical activity (Granero-Gallegos & Baena-extreme, 2019). Another opinion says Physical education is a completely social subject, and because of that, it must be connected with the situations in which people live (Hortigüela-Alcalá et al., 2021).

In the 2013 curriculum (K13) sports education at the basic education level is integrated into the Subject of Physical Education Health and Sport (PJOK). In line with that, the essence of physical education includes all elements of fitness, physical movement skills, health, games, sports, dance, and recreation (Qomarrullah, 2015). PJOK learning which is dominated by physical movements is carried out in open spaces or the field. The method for sports education is the deductive method or command method, with a variety of assignments, demonstrations, and a little explanation (Muhammad, 2018).

In accordance with the Circular (Kemendikbud Number 4 of 2020), regarding the Implementation of Education

in the Emergency Period of Coronavirus Disease (Covid-19), PJOK learning, which was originally carried out face-to-face, is now carried out online/remotely. This certainly has an impact on PJOK learning at SD NEGERI Se District of Lambunu, Parigi Moutong Regency, Central Sulawesi, among other things, learning is not carried out in accordance with the lesson plan, as a result, many students and also parents complain about the relatively large number of assignments given by the teacher, parents also complained of difficulties accompanying their children to study online, and there were some students who did not have or did not have cellphones or communication tools used for online learning as well as some students who had limited network/poor internet connections.

So online PJOK learning needs to be known for its effectiveness so that it can be evaluated to find clear corrective steps so that they are ready to face the new normal era (New Normal). This is what underlies the author to describe the effectiveness of PJOK learning in SD NEGERI Se, Lambunu District, Parigi Moutong Regency, Central Sulawesi.

Based on the formulation of the problem, the research objective to be achieved in this study is to find out the Effectiveness of online distance learning during the COVID-19 pandemic for PJOK

subjects at SDN in Lambunu District, Parigi Moutong Regency, Central Sulawesi.

B. Method

This type of research is quantitative descriptive research with a one-shot case study approach. (Arikunto, 2017) states that descriptive research is research that aims to describe circumstances, situations, events, and others. According to (Sugiyono, 2017) the quantitative method is a research method used to examine populations or samples. Data analysis is statistical quantitative with the aim of testing the hypotheses that have been set. This research method uses a survey method while collecting data using a questionnaire. The ongoing COVID-19 pandemic does not allow direct data collection, so online questionnaires are given. The population in this study were PJOK teachers in public elementary schools in Lambunu District, Parigi Moutong Regency, Central Sulawesi, totaling 9 people.

The data analysis technique in this study used quantitative descriptive analysis with percentage data used to examine the variables in this study, namely the effectiveness of online distance learning during the Covid-19 pandemic. The percentage formula used is in accordance with the following formula:

$$P = \frac{f}{n} \times 100\%$$

Information:

P = Percentage

F = The frequency being searched for

N = Number of Cases (Number of frequencies/number of Individuals)

C. Result and Discussion

This research was conducted to determine the effectiveness of online distance learning during the COVID-19 pandemic at SDN Lambunu District, Parigi Moutong Regency, Central Sulawesi. Data

were obtained using a questionnaire containing several questions to determine the effectiveness of online distance learning during the COVID-19 pandemic. Furthermore, the results of the questionnaire were analyzed using IBM SPSS 16. The results of the analysis obtained are by the formulation of the problem, which can be seen as follows:

1. Learning Indicators

A descriptive analysis on learning indicators with several question items of 1 item obtained the following results:

Table 1. Learning

Answer	Frequency	Percentage
Yes	9	100%
No	0	0
Other	0	0
Total	9	100%

Based on the table and figure above, it can be seen that during the COVID-19 pandemic, all teachers (100%) continued to carry out PJOK learning.

2. Indicators of Learning Methods

A descriptive analysis on indicators of learning methods with several question items of 1 item is obtained as follows:

Table 2. Learning Method

Answer	Frequency	Percentage
Yes	6	66.7%
No	1	11.1%
Other	2	22.2%
Total	9	100%

Based on the table and figure above, it can be seen that in the condition of the COVID-19 pandemic, 66.7% of teachers use online learning methods, 11.1% of teachers give homework, and 22.2% of

teachers use other methods, namely limited face-to-face.

3. Indicators of Compatibility of Learning Materials

Based on data analysis, it is known that

during the COVID-19 pandemic, 22.2% of teachers provided learning materials through lesson plans. 0% of teachers provided learning materials that did not comply with the lesson plans. 22.2% of teachers provided learning materials but did not coherently, and 11.1% of teachers provided learning by the RPP but the learning model adjusts.

4. Learning Media Indicators

Based on data analysis, it is known that the condition of the COVID-19 pandemic is 66.7% of teachers apply to learn media through the Whatsaap Group, 0% of teachers apply to learn media through Google Classroom, and as many as 33.3% of teachers apply other learning media, namely offline.

5. Student Participation Indicators

A descriptive analysis on the indicator of student participation with a total of 1 item of question items obtained the result that the condition of the COVID-19 pandemic was 66.70% of teachers said students were enthusiastic and actively participated in participating in learning 11.1% of teachers said students did not pay attention to learning and 22.2% of teachers said another with 2 options, namely: Students are less enthusiastic and students are enthusiastic but not optimal.

6. Learning Process Indicators

A descriptive analysis of indicators of the learning process with several question

items of 1 item obtained the result that in the conditions of the COVID-19 pandemic as many as 77.8% of teachers collaborated with parents of students in the learning process and 22.2% of teachers provided video tutorials and PPT in the learning process.

7. Learning Effectiveness

A descriptive analysis of indicators of learning effectiveness with several question items of 1 item obtained the result that during the COVID-19 pandemic, 55.6% of teachers said online learning was by the lesson plans and 44.4% of teachers said only part of the learning was by the lesson plans.

8. Assessment System and Process

A descriptive analysis of system indicators and the assessment process with a total of 1 item of question items obtained the result that in the condition of the COVID-19 pandemic as many as 77.8% of teachers assessed students based on collecting assignments and exams 11.1% of teachers assessed students based on discussion forums, and 11.1 % of teachers make other assessments based on the suitability of collecting assignments, exams, and attendance.

9. Assessment

Descriptive analysis of the assessment indicators with a total of 1 question item obtained the result that during the COVID-19 pandemic, 11.1% of teachers said that

student assessment through online learning was well implemented, and 88.9% of teachers said student assessment through online learning was less effective.

10. Learning Constraints

A descriptive analysis on the indicator of learning constraints with a total of 1 item of question items obtained the result that the condition of the COVID-19 pandemic was 88.9% of teachers said that the obstacles in learning were difficulties accessing the internet, and 11.1% of teachers said other factors, namely the lack of communication facilities and the lack of factors parental guidance and supervision as they are busy gardening and farming.

Discussion

This study aims to determine the effectiveness of ring distance learning during the COVID-19 pandemic for PJOK subjects at SDN in Lambunu District, Parigi Moutong Regency, Central Sulawesi using online questionnaires distributed to teachers.

The results of the study showed that during the COVID-19 pandemic all teachers continued to carry out PJOK learning. Overall, the implementation of PJOK learning uses online media by adjusting the material according to the conditions and directions from the education office. This was adjusted to circular letter number 4 concerning the implementation of

education during the COVID-19 pandemic emergency which stated that the government was imposing online learning activities in the context of preventing the spread of COVID-19 (Kemendikbud, 2020). Studying at home is carried out to provide a meaningful learning experience for students and can be focused on life skills education, including regarding the COVID-19 pandemic.

The results of research on learning indicators show that all teachers (100%) continue to provide PJOK lessons during the COVID-19 pandemic. The existence of the COVID-19 pandemic has disrupted learning activities, so the government recommends carrying out learning activities at home by utilizing existing technology.

The results on the learning method indicator show that 66.7% of teachers use online learning methods, 11.1% of teachers give homework and 22.2% use other methods, namely by combining limited face-to-face methods. With an appeal from the government to reduce activities that cause large crowds, such as teaching and learning activities in schools, learning activities are carried out at home using the online method.

The results on the suitability indicators of learning materials show that 22.2% of teachers provide material

according to the RPP, there are no teachers who provide material that is not by the RPP, 66.7% of teachers provide learning material according to the RPP but not coherently and 11.1% of teachers choose other materials, namely material according to the RPP but the learning model adjusts. This is because the teacher adjusts to instructions from the local education office. Distance education is focused on increasing students' understanding of the coronavirus and the COVID-19 outbreak (Mendikbud, 2020).

The results on learning media indicators show that 66.7% of teachers use learning media through WhatsApp Group, 0% of teachers apply learning media through Google Classroom and as many as 33.3% of teachers apply other learning media, namely offline. Based on the results of this study, WhatsApp groups are the main choice to support the implementation of online PJOK learning because they are easy to use by all groups, including teachers, students, and parents. Through the WhatsApp group, the teacher can provide material and evaluate it through assignments sent by students. Apart from the WhatsApp group, there are other learning media, namely Google Classroom, Zoom, and Edmodo, but these media are not used because many teachers, students, and parents have difficulty and do not understand their use.

The results on the student participation indicator show that 66.70% of teachers say students are enthusiastic and participate actively in learning 11.1% of teachers say students do not pay attention to learning, and 22.2% of teachers say other with two options namely: students are less enthusiastic and students are enthusiastic but not optimal. This can be seen from the high enthusiasm of students and teachers to carry out learning at each meeting and the high desire of students to complete assignments properly according to the allotted time. Students who are not active in learning are caused by boredom due to too many assignments from various subjects.

The results on the learning process indicators show that 77.8% of teachers work together with parents of students in the learning process and 22.2% of teachers provide video tutorials and PPT in the learning process. In this case, parents have a very important role in learning activities at home, including accompanying, guiding, directing, and supervising their children in completing the learning process.

The results on the learning effectiveness indicators show that 55.6% of teachers say online learning is by the lesson plans and 44.4% of teachers say that only part of the learning is by the lesson plans. This is because the teacher in

providing material and assignments is adjusted to the instructions from the local education office.

The results on system indicators and the assessment process show that 77.8% of teachers evaluate students based on assignments and examinations, 11.1% of teachers assess students based on discussion forums and 11.1% of teachers conduct other assessments based on the suitability of assignments, exams, and attendance. The limitations of the teaching and learning process caused by the COVID-19 pandemic have affected the assessment system and process. This is addressed by collecting assignments and exams online so that student assessments can still be carried out properly.

The results on the assessment indicators show that 11.1% of teachers said that student assessment through online learning was carried out well, and 88.9% of teachers said student assessment through online learning was less effective. Learning is more theoretical and minimally practical because direct interaction with students is not possible. This causes teachers to be able to carry out assessments from the cognitive domain (knowledge) only, and unable to carry out assessments from the affective (attitude) and psychomotor (skills) domains.

The results on the learning constraints

indicator showed that 88.9% of teachers said that the obstacles in learning were difficulties accessing the internet, and 11.1% of teachers said other factors were the lack of communication facilities and the lack of parental guidance and supervision because they were busy gardening and farming. Lambunu sub-district is a remote area in the Parigi Moutong district, Lambunu sub-district itself is still classified as an area with the 3T category (Disadvantaged, foremost and outermost), so internet access to Lambunu sub-district is still very minimal so that in this online learning, it is difficult to access the internet is the main obstacle and some students do not have adequate communication tools. Of course, this will affect the learning process at home. Students will also find it difficult to consult with teachers, especially for learning that is considered to require deeper explanation and understanding. As a newly developed physical education model, web-based physical education presents both challenges and opportunities (Deng et al., 2020).

Of the 10 indicators described above, PJOK learning remains the same implemented despite the COVID-19 pandemic. In implementation. There is a slight difference from the usual face-to-face meetings to online learning at home

by utilizing technology for the sake of breaking the chain of the spread of COVID-19. The teacher also adjusts the plan implementation of learning with current conditions and according to instructions from the department of local education. In delivering material, the teacher uses the application. WhatsApp group because it's easy to use so learning can run effectively.

D. Conclusion

Based on the results of the research above, it can be seen that the effectiveness of online distance learning during the COVID-19 pandemic for PJOK subjects at SDN Lambunu District, Parigi Moutong Regency, Central Sulawesi is explained in several indicators, namely, 100% of teachers still providing PJOK learning, 66.7% of teachers using the online learning method 22.2% of PJOK learning is by the RPP and 66.7% according to the RPP but not coherent 66.7% uses WhatsApp group learning media, 66.7% of students are enthusiastic and participate well in learning, 77.8% of teachers who work with parents of students so that the PJOK learning process continues 44.4% of teachers say learning is by the lesson plans 77.8% of assessments are based on collecting assignments and exams 88.9% of teachers say assessments on online learning are ineffective, and 88.9% of obstacles in PJOK learning namely:

difficulty accessing the internet.

E. Acknowledgements

Thanks to all parties who have helped in the completion of this article

F. Conflict of Interest

No Conflict of interest

Reference

- Arikunto, S. (2017). *Pengembangan Instrumen Penelitian dan Penilaian Program*. Yogyakarta: Pustaka Pelajar.
- Bergeron, M. F., Mountjoy, M., Armstrong, N., Chia, M., Côté, J., Emery, C. A., Faigenbaum, A., Jr, G. H., Kriemler, S., Léglise, M., Malina, R. M., Pensgaard, A. M., & Sanchez, A. (2015). International Olympic Committee consensus statement on youth athletic development. 843–851. <https://doi.org/10.1136/bjsports-2015-094962>
- Bijen, F., & Ferman, K. (2020). Teaching Strategies for Physical Education during the COVID-19 Pandemic. *Journal of Physical Education, Recreation & Dance*, 91(9), 48–50. <https://doi.org/10.1080/07303084.2020.1816099>
- Cearense, T. (2020). *Pandemia do Coronavírus no Brasil: Impactos no Pandemia do Coronavírus no Brasil: Impactos no Território Cearense*. <https://doi.org/10.4000/espacoconomia.10501>

- Deng, C. H., Wang, J. Q., Zhu, L. M., Liu, H. W., Guo, Y., Peng, X. H., Shao, J. B., & Xia, W. (2020). Association of web-based physical education with mental health of college students in wuhan during the COVID-19 outbreak: Cross-sectional survey study. *Journal of Medical Internet Research*, 22(10). <https://doi.org/10.2196/21301>
- Granero-gallegos, A., & Baena-extremera, A. (2019). Interaction Effects of Disruptive Behaviour and Motivation Profiles with Teacher Competence and School Satisfaction in Secondary School Physical Education. *International Journal of Environmental Research and Public Health*, 1–14. <https://doi.org/https://doi.org/10.3390/ijerph17010114>
- Hortigüela-Alcalá, D., Hernando-Garijo, A., & Ángel Pérez-Pueyo. (2021). La Educación Física en el contexto COVID-19. Un relato de profesores de diferentes etapas educativas. *Retos*, 41, 764–774. <https://doi.org/https://recyt.fecyt.es/index.php/retos/index>
- Kemendikbud Nomor 4 Tahun. (2020). Tentang Pelaksanaan Pendidikan Dalam Masa Darurat Coronavirus Disease (Covid-19). Jakarta
- Majumder, M. S., & Kenneth D. Mandl. (2020). Early transmissibility assessment of a novel coronavirus in Wuhan, China. 713.
- Medeiros, A. D. A., Batiston, A. P., de Souza, L. A., Ferrari, F. P., & Barbosa, I. R. (2021). Analysis of physical therapy education in Brazil during the COVID-19 pandemic. *Fisioterapia Em Movimento*, 34, 1–9. <https://doi.org/10.1590/fm.2021.34103>
- Muhamamad, S. (2018). Pelaksanaan Proses Belajar Mengajar Pendidikan Jasmani Olahraga dan Kesehatan Pada Sekolah Dasar. : : *Jurnal Pendidikan Jasmani Dan Olahraga*, 1(2), 64–73. <https://doi.org/https://doi.org/10.31539/jpjo.v1i2.136>
- Pérez-Campos Mayoral, L., Hernández-Huerta, M. T., Mayoral-Andrade, G., Pérez-Campos Mayoral, E., & Pérez-Campos, E. (2020). A letter to the editor on “World Health Organization declares global emergency: A review of the 2019 novel Coronavirus (COVID-19).” *International Journal of Surgery*, 79(January), 163–164. <https://doi.org/10.1016/j.ijssu.2020.05.066>
- Picot, S., Marty, A., Bienvenu, A. L., Blumberg, L. H., Dupouy-Camet, J., Carnevale, P., Kano, S., Jones, M. K.,

- Daniel-Ribeiro, C. T., & Mas-Coma, S. (2020). Coalition: Advocacy for prospective clinical trials to test the post-exposure potential of hydroxychloroquine against COVID-19. *One Health*, 9(January). <https://doi.org/10.1016/j.onehlt.2020.100131>
- Qomarrullah, R. (2015). Model Aktivitas Belajar Gerak berbasis Permainan Sebagai Materi Ajar Pendidikan Jasmani. *Journal of Physical Education, Health and Sport*, 2(2), 76–88.
- Sollerhed, A., Horn, A., Culpan, I., & Lynch, J. (2020). Adolescent physical activity-related injuries in school physical education and leisure-time sports. <https://doi.org/10.1177/0300060520954716>
- Sugiyono. (2017). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: PT Alfabeta.
- UU No. 20. (2003). *Undang-Undang Republik Indonesia No. 20 Tentang Sistem Pendidikan Nasional (Issue 1)*.
- Zu, Z. Y., Jiang, M. D., Xu, P. P., Chen, W., Ni, Q. Q., Lu, G. M., & Zhang, L. J. (2020). Coronavirus Disease 2019 (COVID-19): A Perspective from China. *Radiology*, 2019, 200–209.



Development Of Floor Gymnastic Learning Device Based On Articulate Storyline Application

Sigit Wahyudin, Lokananta Teguh Hari Wiguno, Ari Wibowo Kurniawan*

Universitas Negeri Malang, Jl. Semarang No. 5 Malang, Jawa Timur, 65145, Indonesia

e-mail: ari.wibowo.fik@um.ac.id

Abstract

In conducting research, it certainly has a specific goal, namely to develop a teaching and learning tool for floor gymnastics material based on the articulate storyline application. The method used when conducting research is the Research and Development (R&D) approach with the development model that has been carried out. Assessments from several experts including learning experts obtained good results, and for the media expert's assessment obtained a good value, the SD game expert's assessment obtained a good value, the PJOK expert's assessment obtained a good value, the floor gymnastics expert's assessment obtained a good value, and when conducting small group trials and large group trials get very good ratings and can be used by educators to teach floor exercise material. So it can be concluded that the product development of floor exercise learning tools based on the articulate storyline application can be used for teaching & can be used as a reference for learning success for PJOK material for class IV Elementary School when learning floor gymnastics.

Keywords: Learning Devices, Floor Exercises, Articulate Storyline Applications

corresponding author: ari.wibowo.fik@um.ac.id

Artikel Info:

Submitted: 11/10/2022

Revised: 11/10/2022

Accepted: 29/11/2022

Published: 30/11/2022

How to Cite: Wahyudin, S., Wiguno, L, T, H., Kurniawan, A, W. (2022). Development Of Floor Gymnastic Learning Device Based On Articulate Storyline Application. *Journal Coaching Education Sports*, 3(2), 201-219S. <https://doi.org/10.31599/jces.v3i2.1611>

Author's Contribution: **Author's Contribution:** a) Research Design; b) Data Collection; c) Statistical Analysis; d) Preparation of Manuscripts; e) Fund Collection

A. Introduction

The world of education is required to be able to produce advanced human resources (HR), possessing various knowledge and skills in accordance with their respective fields by utilizing technological advances. Teachers / educators are the front guard in the world of education in educating the nation. Teachers must be able to produce future generations of young people who are qualified and capable of high competitiveness. Therefore, the teacher must have an important role in the scope of education, so that almost all efforts in renewal in the field of education are in the hands of a teacher.

In education, there are several subjects, one of which is PJOK. Of course, with PJOK lessons aiming to be able to change attitudes, behavior, responsibility, honesty, cooperation and uphold sportsmanship and be able to develop individual skills, PJOK is an educational center in schools that involves physical activity. In physical education there is a physical activity including big ball game material. According to Wiarto, (2015), PJOK is subject matter that is systematically arranged and planned and also has elements including psychomotor elements, cognitive elements, and affective elements with the aim of

increasing one's self-knowledge. Meanwhile, according to Akhmad, (2016), stated that PJOK is education that can improve and encounter changes in a person including mental, physical and emotional burdens. From the statement above, it can be concluded that physical education is part of teaching and learning that is structured in a planned manner so that a person can change himself in increasing knowledge so that it can include affective, psychomotor, and cognitive elements.

Education. Physical education is a subject that is given at every level of school. According to Mylsidayu, (2014), physical education is a physical and physical activity that includes cognitive, affective, and psychomotor aspects. Physical education is provided to help students add knowledge and be skilled in the field of sports science. Meanwhile, according to Mustafa, & Dwiyoogo, (2020), physical education is education that improves skills through movement so that they can obtain health and can also obtain the expected goals such as skills, knowledge, and attitudes. Therefore educators must understand the purpose of the educational process, especially PJOK lessons so that students can develop according to the targets to be achieved. Therefore, it can be concluded that

Physical Education is education that focuses on the physical, movement, and emotional activities of students. Punjab also emphasizes that students get better spiritual changes, as well as achieve physical, movement, social, and mental changes. In PJOK learning there are several learning materials, one of which is the material in PJOK at school is floor gymnastics lessons.

Learning can be interpreted as a form of interaction involving several parts, including educators with students, and vice versa, and subject matter. Communication failures often occur during teaching and learning. According to Pane, & Dasopang, (2017), learning is a way to impart knowledge or guidance directly to students in the learning process. Meanwhile, Larsson, & Karlefors, (2015), states that an educator is not only a source of learning, because an educator must be able to modify existing learning so that students can understand when learning activities take place and are not easily bored with existing learning. Floor gymnastics is a physical education subject material given at school. According to Sapsuha, (2019), states that a floor gymnastics is a form of activity that can be done with elements of flexibility,

accuracy, and speed, as well as self-confidence. Therefore, it can be concluded that floor gymnastics is an activity that involves elements of beauty and all parts of one's body movement skills. besides that, good floor exercise movements can improve body fitness and motion experience including movement agility, flexibility, balance, as well as speed, and agility. Meanwhile, Agustina, (2020), states that floor gymnastics is part of gymnastics, as the name implies floor gymnastics activities are carried out on a carpeted floor which is part of the floor gymnastics infrastructure. Floor gymnastics is usually better known as independent training, because when gymnasts do activities or exercises that don't involve any tools at all. So the floor gymnastics material is very closely related to the existence of psychomotor competence and affective competence by formulating this into KI, KD which is given at the SD level in class IV. In physical learning, students can learn the basic movements of floor gymnastics contained in the skill competencies and knowledge competencies of physical and health education at the grade IV elementary school level which are formulated as follows:

Table 1 KI & KD Class IV Physical and Health Education
(Permendikbud No 37 of 2018)

Core Competency of Knowledge Class IV	Class IV Skills Core Competencies
3. Understanding factual knowledge by observing and asking questions based on curiosity about himself, God's creatures and their activities, and objects that they find at home, at school, and on playgrounds	4. Present factual knowledge in a clear, systematic, and logical language, in aesthetic works, in movements that reflect healthy children, and in actions that reflect the behavior of children of faith and morality.
Basic Knowledge Competence Class IV	Basic Skills Competency Class IV
3.6 Understanding variations and combinations of various dominant movement patterns (resting, hanging, balance, moving/locomotor, repulsion, swing, hovering, and landing) in floor exercise activities	4.6 Practicing variations and combinations of various dominant movement patterns (resting, hanging, balancing, moving/locomotor, repulsion, swing, hovering, and landing) in floor exercise activities

The statement above can be used as a teacher's reference when teaching to increase abilities and can also be used as material for consideration in developing learning media. The duties or obligations of educators in accordance with their activities are: 1) determining the material to be given, 2) carrying out the teaching and learning process, 3) evaluating teaching and learning outcomes, 4) conducting guidance to students, and 5) carrying out additional tasks in accordance with the obligations of an educator. All educators have responsibilities in preparing systematic & complete lesson plans (RPP) so that learning takes place in an inspiring, interactive, fun, challenging way, so that students are motivated to be more active in the teaching and learning process.

Multimedia is a combination of several media such as text, audio, graphics, and is used as information or a means of conveying messages and receiving information. Sports teachers almost never make or apply interactive multimedia in their learning process, especially floor gymnastics learning materials. This makes students feel bored because the interest of students during the teaching and learning process decreases. So along with the rapid development of technology, it is hoped that it will be able to develop competence and increase creativity when using media used for the learning process to improve the quality of learning. Learning media is very influential during learning, especially during the teaching and learning process in more sophisticated times where most educational institutions use a tool to be

used in delivering teaching and learning material so that students can understand and accept the material presented. According to McNeil, (2015), states that a learning media can make it easier for students when understanding information so that students can easily understand the skills that have been practiced. The learning process will be interesting if using various variations when teaching and learning, especially PJOK subjects (Kurniawan, & Tangkudung, 2017).

Based on the answers from the KKG when conducting initial research in Trowulan District, Mojokerto Regency, the researchers conducted interviews to seek needs analysis according to what the researchers needed, by conducting direct interviews with the head of the KKG PJOK SD in Trowulan District, Mojokerto Regency, there is also a way On the other hand, by distributing questionnaires via Google forms to KKG members, the researcher obtained the result that teachers still use learning media such as student worksheets/LKS as learning media, while this method is the old method that is often used (conventional). In addition, the facilities owned by PJOK teachers are quite adequate, starting from LCDs, smartphones, and computers/laptops. However, PJOK teachers do not balance this in using learning media in the form of

applications or by displaying pictures of learning practices, independent learning activity units or power points. In addition, there has not been an application created for floor gymnastics learning based on the articulate storyline application. The application of an articulate storyline is a medium used as a way to channel information with the desired intention, to produce an interesting presentation requires a person's creativity and high innovation so that it can be combined into a work (Pratama, 2018). The articulate storyline application is software to function as communication objects as intermediaries for channeling and displaying information that has the desired parts, such as including videos, images, animations, audio, and others that can be accessed online and offline (Purnama, & Asto, 2014).

B. Method

The development and research part of the floor exercise learning process based on the articulate storyline application aims to create a product that is needed today. In line with the opinion of Winarno, (2013), that development research is a research that seeks to create products according to the desired needs. The product manufacturing design is very useful for solving a problem that is currently being faced in the educational environment, very

useful when the teaching and learning process of PJOK material is used. The development of floor exercise learning tools based on the articulate storyline application is able to take advantage of existing stages including: 1) Needs Analysis Stage, 2) Product Design Stage, 3) Product Development Stage, 4)

Implementation Stage, and 5) Product Evaluation Stage . The Likert scale instrument has various ratings ranging from bad to good categories. To make it simple when analyzing data, it should be given a predetermined value such as a value of 1, value 2, value 3, and value 4 for the Likert rating scale (Sugiyono, 2017).

Table 2 Rating Scale for Positive Statements

No	Information	Answer	Score Positif
1	Strongly agree	A	4
2	Agree	B	3
3	Doubtful	C	2
4	Don't agree	D	1

The formula used to process the data is in the form of a descriptive quantitative percentage analysis as follows:

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

Information:

V : Validity

TSEV : Total empirical score of the

validator

S-max :Maximum score expected

100% : Constant number

In order to make it easier for researchers when the process of concluding data from the results of percentage analysis can be classified into percentage classifications as follows:

Table 3 Product Quality Criteria

Kriteria	Information	Meaning
00,00%- 25,00%	Totally Invalid	Forbidden to use
25,01%- 50,00%	Invalid	Can not be used
50,01%- 75,00%	Valid Enough	Used with minor revisions
75,01%- 100,00%	Very Valid	Used without revision

C. Result and Discussion

In this section the researcher describes data analysis on the product being developed, data presentation is part of the required analysis, validation by experts, and data from small and large group test results. The results of the analysis

obtained by the assessment of learning experts refer to the aspects of accuracy, clarity, and ease of product development for floor exercise learning tools which are presented in the following table:

Table 4 Assessment of Data Analysis by Learning Experts

No	Aspect	%	Category
1	Accuracy	93	Very valid
2	convenience	92	Very valid
3	Clarity	100	Very valid
	Average	95	Very valid

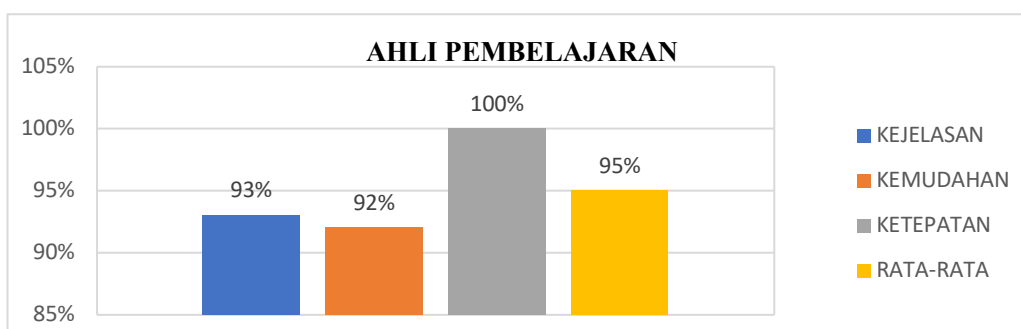


Figure 1. Percentage Diagram of Learning Expert Outcomes for Product Development of Articulate Storyline Application-Based Floor Gymnastics Learning Devices

The diagram above states that the percentage obtained when carrying out the learning expert validation test obtained a result of 95%, then the results were modified into a table which will later refer to the criteria and assessment of the feasibility of floor exercise learning

devices that have been developed and can be used.

Data analysis obtained from the assessment of elementary school game experts refers to the perspective of convenience, accuracy, clarity, suitability, and attractiveness as presented in the following table:

Table 5 Assessment of Data Analysis by Elementary Game Experts

No	Aspect	%	Category
1	Clarity	89	Very Valid
2	convenience	100	Very Valid
3	attractiveness	100	Very Valid
4	compatibility	100	Very Valid
5	Accuracy	91	Very Valid
Average		96	Very Valid

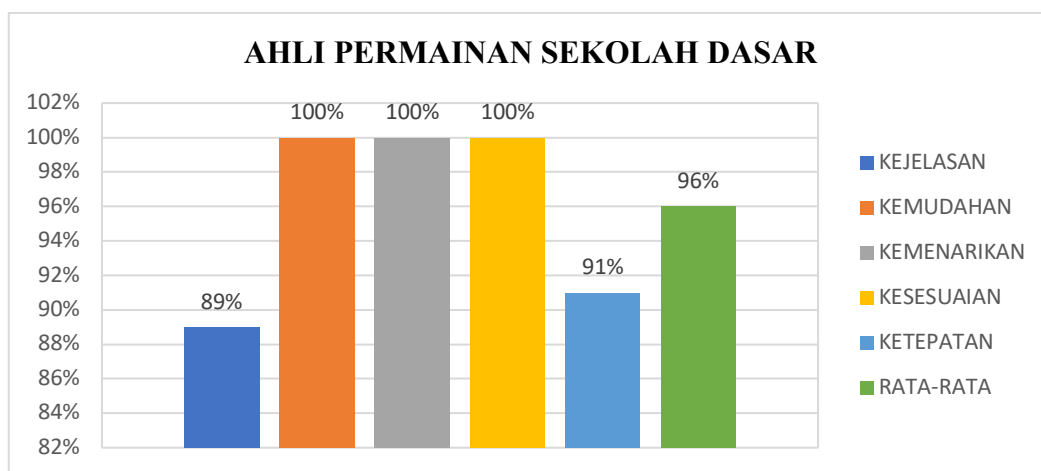


Figure 2. Percentage Diagram of Elementary Game Expert Results for Articulate Storyline Application-Based Floor Gymnastics Learning Device Development Products

The diagram above states that the percentage obtained when conducting an SD game expert validation test obtained a result of 96%, then the results were modified into a table which would later refer to the criteria and assessment of the feasibility of floor exercise learning

devices that have been developed and can be used.

Data analysis obtained from the assessment of PJOK experts refers to the perspective of convenience, accuracy, clarity, suitability, and attractiveness which is presented in the following table:

Table 6 Assessment of Data Analysis by PJOK Experts

No	Aspect	%	Category
1	Clarity	86	Very Valid
2	convenience	75	Valid Enough

3	attractiveness	100	Very Valid
4	suitability	100	Very Valid
5	Accuracy	94	Very Valid
Average		91	Very Valid

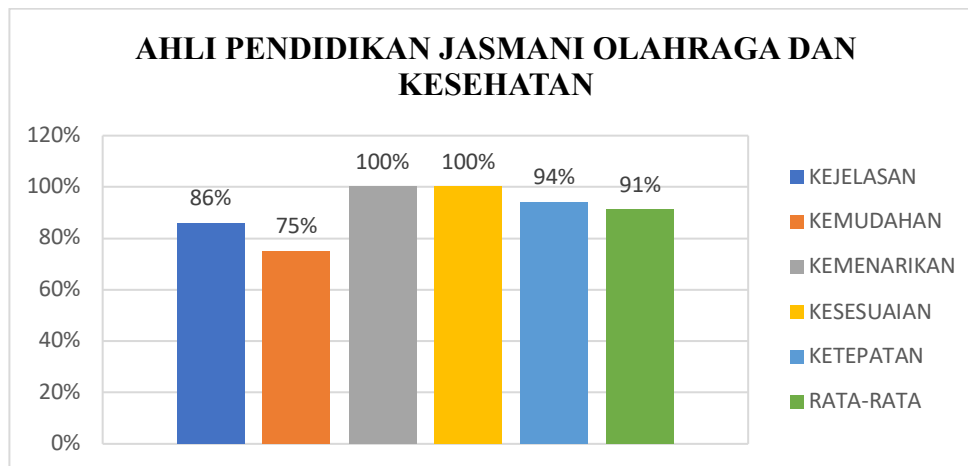


Figure 3. Percentage Diagram of PJOK Expert Results for Product Development of Articulate Storyline Application-Based Floor Gymnastics Learning Devices

The diagram above states that the percentage obtained when carrying out the PJOK expert validation test obtained 91% results, then the results were modified into a table which will later refer to the criteria and assessment of the feasibility of floor exercise learning devices that have been developed and can be used.

The data analysis obtained from the assessment of media experts refers to the viewpoints of convenience, accuracy, completeness, clarity, suitability, and attractiveness as presented in the following table:

Table 7 Assessment of Data Analysis by Media Experts

No	Aspect	%	category
1	convenience	100	Very Valid
2	Completeness	100	Very Valid
3	Clarity	100	Very Valid
4	Accuracy	83	Very Valid
5	attractiveness	95	Very Valid
6	suitability	100	Very Valid

Average 96 Very Valid

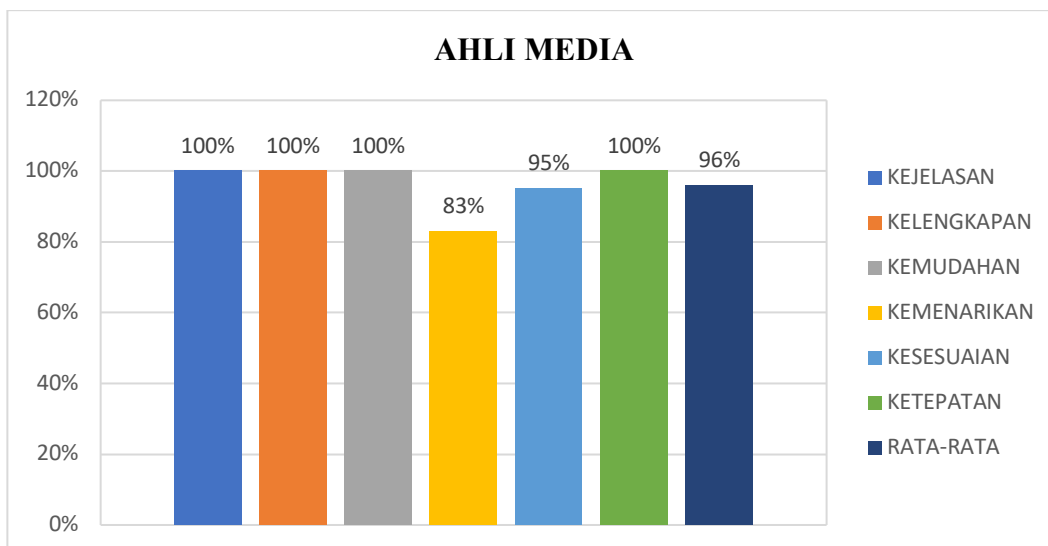


Figure 4. Percentage Diagram of the Results of Media Experts for Product Development of Articulate Storyline Application-Based Floor Gymnastics Learning Devices

Based on the results of data analysis from the media expert validation test, the percentage obtained in the diagram above states that the percentage obtained when carrying out the media expert validation test obtained 96% results, then the results were modified into a table which will later refer to the criteria and assessment of the feasibility of floor

exercise learning devices. has been developed and can be used.

The analytical data obtained from the assessment of floor gymnastic experts refers to the point of view of convenience, accuracy, clarity, suitability, and attractiveness which is presented in the following table:

Table 8 Assessment of Data Analysis by Floor Gymnastics Experts

No	Aspect	%	Category
1	attractiveness	100	Very Valid
2	suitability	78	Very Valid
3	Clarity	100	Very Valid
4	Accuracy	75	Valid Enough

5	convenience	75	Valid Enough
	Average	86	Very Valid

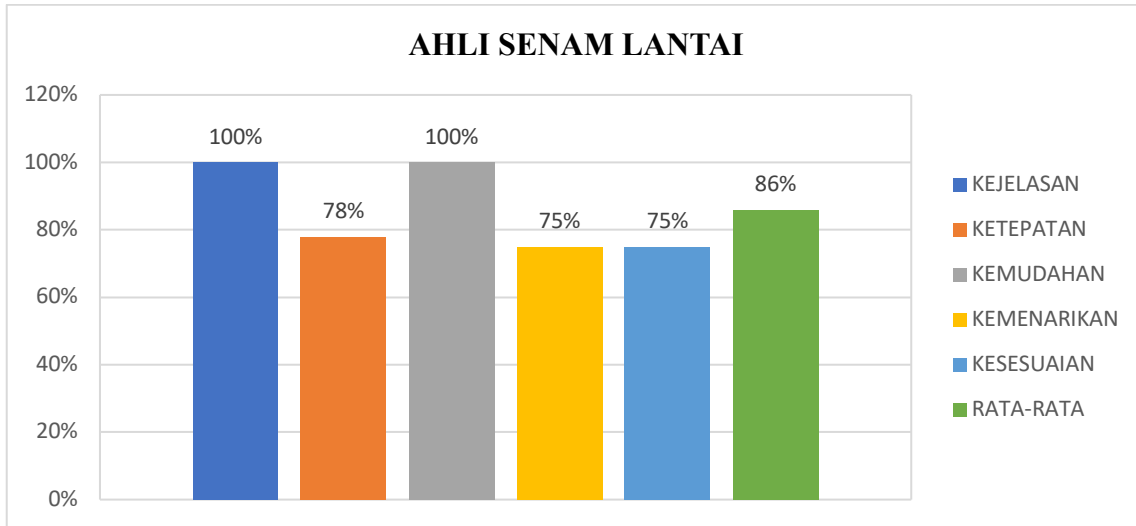


Figure 5. Percentage Diagram of Floor Gymnastics Expert Results for Articulate Storyline Application-Based Floor Gymnastics Learning Device Development Products

The diagram above states that the percentage obtained when carrying out the floor exercise expert validation test obtained 86% results, then the results were modified into a table which would later refer to the criteria and assessment of the feasibility of floor exercise learning

devices that have been developed and can be used.

The data analysis obtained from the small group test refers to the point of view of convenience, usability, clarity, suitability, and attractiveness as presented in the following table:

Table 9 Assessment of Small Group Trial Analysis of KKG PJOK SD

No	Aspect	%	Category
1	Utility	90	Very Valid
2	suitability	89	Very Valid
3	Clarity	90	Very Valid
4	convenience	90	Very Valid
5	attractiveness	100	Very Valid
	Average	92	Very Valid

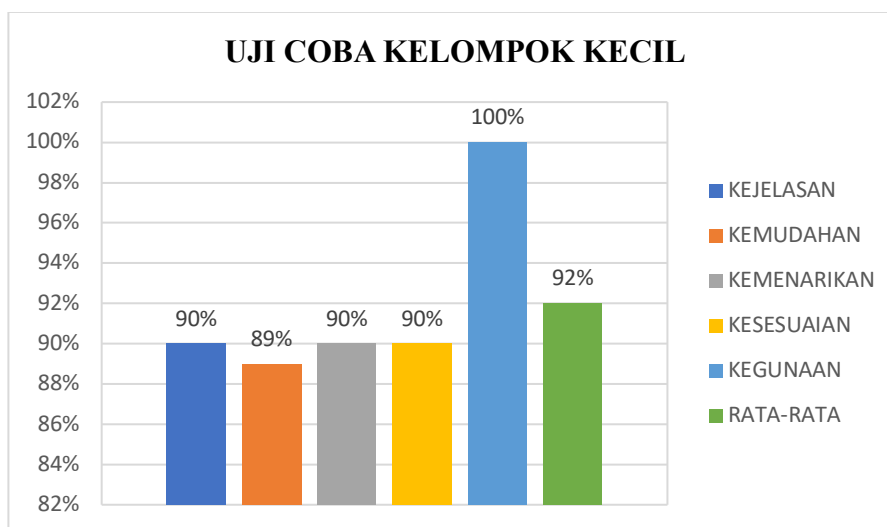


Figure 6. Percentage diagram of the results of the small group trial analysis of KKG PJOK SD

The diagram above states that the percentage obtained when conducting small group trials on PJOK SD teachers in Trowulan District, Mojokerto Regency obtained a result of 92%, then the results were modified into a table which will later refer to the criteria and assessment of the feasibility of floor exercise learning

devices that have been developed and usable.

Data analysis obtained from the large group test refers to the point of view of convenience, usability, clarity, suitability, and attractiveness as presented in the following table:

Table 10 Assessment Analysis of the Large Group Trial of KKG PJOK SD

No	Aspect	%	category
1	convenience	91	Very Valid
2	Clarity	89	Very Valid
3	Utility	91	Very Valid
4	suitability	93	Very Valid
5	attractiveness	97	Very Valid
	Average	92	Very Valid

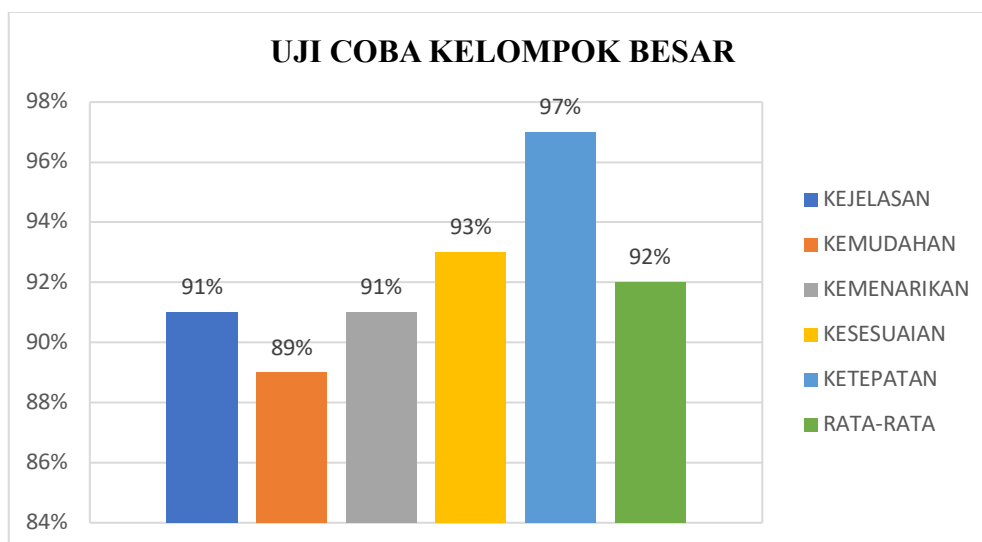


Figure 7. Percentage diagram of the results of the small group trial analysis of KKG PJOK SD

The diagram above states that the percentage obtained when conducting large group trials on PJOK SD teachers in Trowulan District, Mojokerto Regency obtained a result of 92%, then the results were modified into a table which will later refer to the criteria and assessment of the feasibility of floor exercise learning devices that have been developed and usable.

The development carried out is a floor exercise learning device product based on an articulate storyline application to be combined into several parts such as: text, video, sound, graphics. Floor gymnastics material learning device in the form of an articulate storyline application development product. This articulate

storyline application refers to class IV floor gymnastics lessons which are put together in learning material videos. According to Sapitri, & Bentri, (2020), argued that Articulate Storyline is one of the tools that can be used to compile a material by presenting it. Articulate Storyline itself is a device that is in the same position as Microsoft PowerPoint, the advantages of this articulate storyline are more interesting and creative. There are various features that this software has, including movies, pictures, timelines, characters, and many others that are simpler to implement. Articulate Storyline is part of the media authoring tools so that it can be used in making a product, especially for teaching

tools that have been combined into one containing images, videos, text, sound, drafts, and learning animations. The above statement is in accordance with Darnawati, et al, (2019), explaining that an articulate storyline is part of the software created in 2014, the capabilities of this application can combine slides, videos, flash (swf), there are also character animations to be used as a learning media, the benefits of this articulate storyline application can involve students being seen as active when learning takes place. This articulate storyline application can have a good influence on students and educators when delivering learning material in class.

The application-based floor exercise learning device development product will be used as an application form on an Android smartphone that can be accessed by everyone, of course it also makes people curious to try it, this application can be used everywhere. The above is in accordance with Ekayani's statement, (2017), explaining that the existence of learning media can be used as a tool to encourage one's attention and also one's ability to become more motivated in the teaching and learning process takes place, so that learning can be carried out properly and efficiently. Therefore educators realize that with the development of creative and innovative learning media, the teaching and

learning process will be more mastered by students, especially if the material is perceived as very difficult or complex, as well as educators who find it easier to deliver the material. Meanwhile, according to Rachmadtullah, & Sumantri, (2018), explaining that with the development of computer-based media it will be simpler for educators to present material to be learned and can also make it easier for students to receive the material being taught. Therefore it is very necessary to develop innovative and creative learning media so that students can understand the skills that have been given by the teacher. The above is in line with Leow, & Neo, (2014), suggesting that when carrying out a creative learning process, including being able to use learning media content, you can include students, but students are not aware of it so that it can increase the enthusiasm of students and students can be motivated, this has a very good effect on the results of the learning process taking place, especially for students. So the existence of this product can have a good influence on the teaching and learning process in class, especially in PJOK learning. The final form of product development for the articulate storyline application is put together in an application which will later make it easier for everyone to access it both online and offline, because this application can be used via smartphones and laptops and is easy to

carry anywhere. Furthermore, in this articulate storyline application there are various choices of learning implementation plans including KI, KD, floor gymnastics learning materials, floor gymnastics learning videos, assessment, evaluation, and for the last one there is the author's or researcher's biodata which is put together into a product.

The product developed is not just an articulate storyline application, because it refers more to grade 4 floor exercise learning material which is combined into a video display of floor exercise learning material. The product that has been developed will be used as a learning medium when providing floor gymnastics learning material in class to students before putting it into practice, this product can be used as a substitute for infrastructure when the school does not have sufficient infrastructure, therefore with this development product educators are still can channel learning information well. With examples of floor exercise practice images, it can help PJOK teachers when providing floor exercise lessons which have been integrated into an application which contains various kinds of floor exercise movements, including rolling, jumping, spinning, and leaning or what is better known as with floor exercises. This is in line with Mulhim's statement, (2014), floor

gymnastics is an effort to improve physical fitness and exercise can increase dexterity which is done without using tools. Floor gymnastics is part of the material provided at school, especially during the PJOK learning process in elementary schools. This floor exercise material is given in the form of a grid of questions and practice, when learning is in progress, students are expected to be able to understand the basic floor exercise arrangement that has been given by the teacher in each semester and grade level. Basically floor gymnastics is carried out using a mat as a tool for students to protect against injury when practicing it, because floor gymnastics is related to the floor surface.

According to learning experts when testing validations got 95% results, Elementary School game experts when testing validations got 96% results, PJOK experts when testing validations got 91% results, media experts when testing validations got 96% results, floor gymnastics experts when testing validations got results of 86%, small group test when testing validation gets 92% results, large group test when testing validation gets 92% results, so it can be interpreted with the results that have been determined by experts when conducting large and small group trials for learning products in the form of the articulate

storyline application has met good results for its validity and can be used. It is hoped that when learning floor gymnastics takes place educators are able to use current technology and can also add learning media in accordance with the times, so that it can encourage students' attractiveness when learning at school by adding knowledge to educators during the teaching and learning process of physical education sports and health subjects. The above is the same as the statement of Rahman, et al, (2020), stated that from the research that has been done it shows that learning development products about physical fitness in the speed aspect based on interactive multimedia at SMAN 1 in the Turen sub-district can be used due to the development of products in the form of In this interactive multimedia, students look more enthusiastic and active when participating in the learning process, especially on physical fitness material on the speed aspect, because this product contains audio-visual, and many others that are easy to use. With the development of this interactive multimedia product, it can be used as a teacher's reference for learning resources in PJOK subjects. Meanwhile, according to Manulu, et al, (2020), said from the results of research that has been done that with something being developed such as interactive multimedia in the form of Autoplay Media

Studio it can improve strength training abilities, it can also be done by increasing physical strength when doing weight training for students the Sports Coaching Education major is a specialist in basic physical conditions, because it is very suitable for similarities, accuracy, convenience, and attractiveness to understand, learn, and practice.

D. Conclusion

The results of research and development of learning products for floor gymnastics material based on the articulate storyline application can be concluded as a product that has been developed in the form of developing floor exercise learning tools based on the articulate storyline application which is very suitable for use for class IV floor gymnastics material and can be a reference as a support for activities learning to teach class IV PJOK materials for floor gymnastics learning materials.

E. Acknowledgements

Thanks to all parties who have helped in the completion of this article

F. Conflict of Interest

No Conflict of interest

Reference

Agustina M, A. M. (2020). *Peningkatan Hasil Belajar Guling Depan Dalam Pembelajaran Senam Lantai*

- Dengan Metode Mengajar Problem Solving Pada Siswa Kelas Viii Smps Darul Ulum Panaikang Kabupaten Bantaeng* (Doctoral Dissertation, Universitas Negeri Makassar).
- Akhmad, D. I., Pd, M., & Kebudayaan, K. P. D. Sumber Belajar Penunjang Plpg 2016 Pendidikan Jasmani, Olahraga Dan Kesehatan.
- Darnawati, D., Jamiludin, J., Batia, L., Irawaty, I., & Salim, S. Pemberdayaan Guru Melalui Pengembangan Multimedia Pembelajaran Interaktif Dengan Aplikasi Articulate Storyline. *Amal Ilmiah: Jurnal Pengabdian Kepada Masyarakat*, 1(1), 8-16.
- Ekayani, P. (2017). Pentingnya penggunaan media pembelajaran untuk meningkatkan prestasi belajar siswa. *Jurnal Fakultas Ilmu Pendidikan Universitas Pendidikan Ganesha Singaraja*, 2(1), 1-11.
- Kurniawan, A. W., & Tangkudung, J. (2017). Development Of Interactive Multimedia-Based Gymnastics Floor Techniques Learning Model For Junior High School Students. *Jipes-Journal of Indonesian Physical Education and Sport*, 3(1), 100-115.
- Larsson, H., & Karlefors, I. (2015). Physical education cultures in Sweden: fitness, sports, dancing... learning?. *Sport, Education and Society*, 20(5), 573-587.
- Leow, F. T., & Neo, M. (2014). Interactive multimedia learning: Innovating classroom education in a Malaysian university. *Turkish Online Journal of Educational Technology-TOJET*, 13(2), 99-110.
- Manalu, D. L., Dwiyoogo, W. D., & Heynoek, F. P. (2020). Pengembangan multimedia interaktif latihan kekuatan pada matakuliah spesialisasi kondisi fisik dasar bagi mahasiswa Pendidikan Keolahragaan Fakultas Ilmu Keolahragaan Universitas Negeri Malang. *Sport Science and Health*, 2(1), 49-57.
- McNeil, S. (2015). Visualizing mental models: understanding cognitive change to support teaching and learning of multimedia design and development. *Educational Technology Research and Development*, 63(1), 73-96.
- Mulhim, M. (2014). Perbandingan Pengaruh Pelatihan Senam Jantung Sehat Seri II dan Senam Kesegaran Jasmani 2000 Terhadap Kebugaran

- Jasmani. *Multilateral: Jurnal Pendidikan Jasmani dan Olahraga*, 13(2).
- Mustafa, P. S., & Dwiwogo, W. D. (2020). Kurikulum Pendidikan Jasmani, Olahraga, dan Kesehatan di Indonesia Abad 21. *JARTIKA Jurnal Riset Teknologi Dan Inovasi Pendidikan*, 3(2), 422-438.
- Mylsidayu, A. (2014). Psikologi olahraga. *Jakarta: Bumi Aksara*.
- Pane, A., & Dasopang, M. D. (2017). Belajar dan pembelajaran. *Fitrah: Jurnal Kajian Ilmu-Ilmu Keislaman*, 3(2), 333-352.
- Permendikbud No 37 (2018).
- Pratama, R. A. (2018). Media Pembelajaran Berbasis Articulate Storyline 2 Pada Materi Menggambar Grafik Fungsi Di SMP Patra Dharma 2 Balikpapan. *Jurnal Dimensi*, 7(1), 19-35.
- Purnama, S. I. (2014). Pengembangan Media Pembelajaran Interaktif Menggunakan Software Articulate Storyline Pada Mata Pelajaran Teknik Elektronika Dasar Kelas X Tei 1 Di Smk Negeri 2 Probolinggo. *Jurnal Pendidikan Teknik Elektro*, 3(2).
- Rachmadtullah, R. M. S. Z., Ms, Z., & Sumantri, M. S. (2018). Development of computer-based interactive multimedia: study on learning in elementary education. *Int. J. Eng. Technol*, 7(4), 2035-2038.
- Rahman, R., Kurniawan, A. W., & Heynoek, F. P. (2020). Pengembangan Pembelajaran Kebugaran Jasmani Unsur Kecepatan Berbasis Multimedia Interaktif. *Sport Science and Health*, 2(1), 78-92.
- Sapitri, D. (2020). Pengembangan Media Pembelajaran Berbasis Aplikasi Articulate Storyline Pada Mata Pelajaran Ekonomi Kelas X SMA. *Inovtech*, 2(01).
- Sapsuha, N. D. P. (2019). Penerapan Model Pembelajaran Kooperatif Two Stay Two Stray Terhadap Hasil Belajar Senam Lantai Guling Depan (Studi Pada Siswa Kelas X SMKN 1 Kemlagi Mojokerto). *Jurnal Pendidikan Olahraga dan Kesehatan*, 7(1).
- Sugiyono, S. (2010). Metode penelitian kuantitatif dan kualitatif dan R&D. *Alfabeta Bandung*.
- Wiarso, G. (2015). Inovasi pembelajaran dalam pendidikan jasmani. *Yogyakarta: Laksitas*, 37.

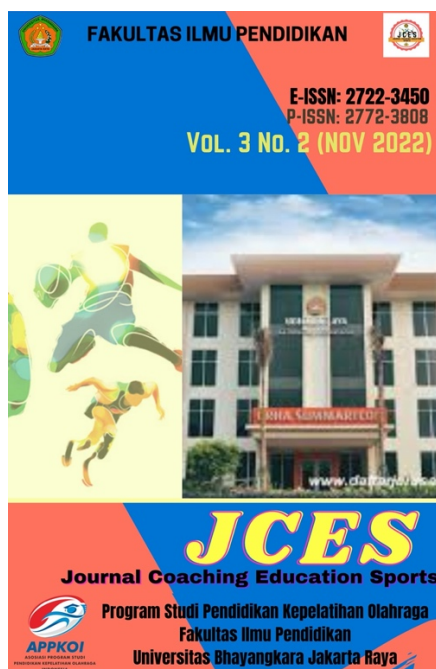
Winarno, M. E. (2011). Metodologi
penelitian dalam pendidikan
jasmani.

E-ISSN: 2722-3450

P-ISSN: 2775-3808

Vol. 3 No. 2

Nov 2022



INDEX PENULIS

Rini Andriani, Hasyim, Rahma Dewi, Afri Tantri, Nurkadri. 2022. **Educational Leadership in the Digital Age Leadership Education in the Digital Age.** *Journal Coaching Education Sports*. Vol. 3 No. 2 Bulan Nov Tahun 2022: 125-130.

Gulasa Octo Gilbert Sihombing. 2022. **UNIMED Tennis Court Community Forehand Drive Overview.** *Journal Coaching Education Sports*. Vol. 3 No. 2. Bulan Nov Tahun 2022: 131 – 138.

Andi Nata Purba. 2022. **Volleyball Smash Ability Level of the Athletes of the Medan Women's Club Volleyball.** *Journal Coaching Education Sports*. Vol. 3 No. 2 Bulan Nov Tahun 2022: 139-146.

Verianto Tumangger, David Siahaan. 2022. **The Effect Of Variations In Extensive Interval Training On Aerobic Endurance Fighter Muaythai Fightculture Medan.** *Journal Coaching Education Sports*. Vol. 3 No. 2 Bulan Nov Tahun 2022: 147-156.

Aprillia Maharani Putri, Leni Apriani. 2022. **Efforts to Improve Student Learning Outcomes Sprint Running Through Traditional Games (Gobak Sodor).** *Journal Coaching Education Sports*. Vol. 3 No. 2 Bulan Nov Tahun 2022: 157-164.

Edi Safwan, Naimatul Jamaliah, Zulfikri. 2022. **Preservation of Traditional Sports of Geudeu-Geudeu Wrestling With Modification of Match Rules in the Pidie Jaya Community of Aceh.** *Journal Coaching Education Sports.* Vol. 3 No. 2 Bulan Nov Tahun 2022: 165-170.

Arya Tangkas Prasetya, Ketut Addy Indrawan, Ni Gusti Ayu Lia Rusmayani. 2022. **The Effect of Push Up and Pull Up Exercises on Shooting Free Throw Results in Basketball Athletes in Jembrana Regency.** *Journal Coaching Education Sports.* Vol. 3 No. 2 Bulan Nov Tahun 2022: 171-178

Ni Putu Anggreni, I Wayan Repiyasa, Komang Ayu Krisna Dewi. 2022. **The Effect of Jigsaw Cooperative Learning Model on Learning Outcomes of Dribbling and Passing Using the Back of the Foot Football Game in Class VII Students of SMP.** *Journal Coaching Education Sports.* Vol. 3 No. 2 Bulan Nov Tahun 2022: 179-188.

Sardiman, Didik Purwanto. 2022. **The Effectiveness of Corner Online Learning During a Pandemic.** *Journal Coaching Education Sports.* Vol. 3 No. 2 Bulan Nov Tahun 2022: 189-200.

Sigit Wahyudin, Lokananta Teguh Hari Wiguno, Ari Wibowo Kurniawan. 2022. **Development Of Floor Gymnastic Learning Device Based On Articulate Storyline Application.** *Journal Coaching Education Sports.* Vol. 3 No. 2 Bulan Nov Tahun 2022: 201-2019.



Judul Ditulis Secara Spesifik dan Efektif dengan Font Times New Roman 15pt (Max 12 Kata: Bahasa Indonesia, Capitalize Each Word, **tidak cetak tebal**)

Title Written Specifically and Effectively in Times New Roman 15pt Font (Max 12 Words: English, Capitalize Each Word, **not in bold**)

Nama Penulis ^{1*}, Nama Penulis ²dst...(tanpa gelar) (font Times New Roman 11pt)

¹Afiliasi, Insitiasi, Alamat, Provinsi, Kode Pos, Negara (font Times New Roman 10pt)

²Afiliasi, Institusi Alamat, Provinsi, Kode Pos, Negara (font Times New Roman 10pt)

e-mail: xxxx@xxxx.xxx¹, xxxx@xxxx.xxx², xxxx@xxxx.xxx³,dst

Abstrak

Abstrak yang ditulis dengan baik dapat membantu pembaca dalam menyimpulkan isi pokok tulisan dengan cepat dan tepat, mengetahui kesesuaian dengan minatnya, sehingga dapat mengambil keputusan untuk terus membaca seluruh dokumen atau tidak. Abstrak sebaiknya **meliputi tujuan, metode singkat, serta temua penting dari jurnal**. Isi abstrak ditulis dengan huruf Times New Roman 9-point. Abstrak berisi 100 hingga 250 kata dengan istilah-istilah yang sudah dikenal luas, tanpa singkatan-singkatan dan tanpa kutipan. Abstrak seharusnya ditulis dalam kalimat bentuk lampau (untuk abstrak dengan bahasa Inggris). Kata kunci berisi kata yang dapat dijadikan rujukan tambahan pada sistem pengindeks dan pengelola abstrak selain judul artikel. Penggunaan kata kunci yang baik dan tepat dapat memudahkan pihak-pihak yang membutuhkan untuk menemukan artikel tersebut.

Kata kunci: maksimal 5 kata terpenting dalam makalah

Abstract

*A well-written abstract can help the reader to conclude the main content of the writing quickly and accurately, to find out what his interests are, so he can make the decision to continue reading the entire document or not. **Abstract should include objectives, concise methods, and important findings from the journal.** Abstract content is written in 9-point Times New Roman font. Abstract contains 100 to 250 words with terms that are widely known, without abbreviations and without quotes. Abstracts should be written in past tense sentences (for abstracts in English). Keywords contain words that can be used as additional references to the indexing system and abstract manager in addition to the article title. The use of good and appropriate keywords can make it easier for those who need to find the article.*

Keywords: maximum 5 keywords from paper

corresponding author: xxxxxxx@gmail.com

Artikel Info:

Submitted: **dd/mm/yy**

Revised : **dd/mm/yy**

Accepted : **dd/mm/yy**

Published: **dd/mm/yy**



Journal Coaching Education Sports is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

A. Pendahuluan

Format teks utama terdiri dari dua kolom menggunakan ukuran kertas A4. Margin teks dari kiri, kanan, atas, dan bawah 2,54 cm. Naskah ditulis dalam Microsoft Word 1997 - 2003, spasi 1,0, Time New Roman 12 pt, layout columns 2 jumlah halaman harus genap, yang dapat didownload di website: <http://ejurnal.ubharajaya.ac.id/index.php/JCESPORTS/index>.

Pendahuluan harus memberikan latar belakang yang jelas, pernyataan yang jelas dari masalah, literatur yang relevan pada subjek, pendekatan yang diusulkan atau solusi, dan nilai kebaruan dari penelitian yaitu inovasi.

Penulisan kutipan dari daftar pustaka dibuat dengan dalam gaya APA 7th Edition. Istilah dalam bahasa asing ditulis miring (*italic*). Disarankan untuk menyajikan artikel dalam struktur bagian: Pendahuluan - Usulan Metode/ Algoritma (opsional) - Metode Penelitian - Hasil dan Pembahasan - Kesimpulan. Contoh (Handayanto et al., 2018).

Tinjauan pustaka dalam bab Pendahuluan untuk menjelaskan perbedaan naskah dengan artikel-artikel ilmiah lainnya, harus bersifat inovatif dan merupakan state of the art dari penelitian yang dilakukan. Bab Metode Penelitian untuk menggambarkan langkah-langkah penelitian dan bab "Hasil dan Diskusi" untuk mendukung analisis hasil. Jika naskah ditulis benar-benar memiliki orisinalitas tinggi, dan mengusulkan metode atau algoritma baru, bab tambahan setelah bab "Pendahuluan" dan sebelum bab "Metode Penelitian" dapat ditambahkan untuk menjelaskan secara singkat metode yang diusulkan atau algoritmanya.

B. Metode Penelitian

Menjelaskan kronologis penelitian, termasuk desain penelitian, prosedur penelitian (dalam bentuk algoritma,

Pseudocode atau lainnya), bagaimana untuk menguji dan akuisisi data. Deskripsi dari program penelitian harus didukung referensi, sehingga penjelasan tersebut dapat diterima secara ilmiah. Hindari menulis konsep keilmuan yang sudah umum serta defenisi-defenisi.

C. Hasil dan Pembahasan

Pada bagian ini, dijelaskan hasil penelitian dan pada saat yang sama diberikan pembahasan yang komprehensif. Hasil dapat disajikan dalam angka, grafik, tabel dan lain-lain yang membuat pembaca memahami dengan mudah. Pembahasan dapat dibuat dalam beberapa sub-bab.

C.1. Sub Bab 1 (tidak dicetak tebal)

Pada bagian ini adalah sub bab.

Tabel dan Gambar disajikan di tengah, seperti yang ditunjukkan di bawah ini dan dikutip dalam naskah. Tabel ditulis berurutan sesuai banyaknya tabel dalam artikel ilmiah dan ditulis di tengah atas, begitu juga dengan keterangan gambar ditulis berurutan sesuai banyaknya gambar dalam artikel ilmiah dan ditulis di tengah bawah. Contoh (Pratiwi & Herlawati, 2019)

Tabel 1. Kuesioner Animasi Interaktif

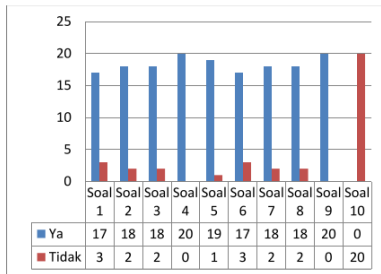
N	Pertanyaan untuk siswa/siswi	Y	Tida
o.		a	k
1.	Menurut adik-adik apakah aplikasi ini sangat mudah digunakan?		
2.	Apakah adik-adik setuju jika aplikasi ini dapat membantu adik-adik dalam mengenal hewan khas pulau di Indonesia?		
3.	Apakah setelah mencoba aplikasi ini adik-adik lebih tertarik untuk belajar hewan khas pulau di Indonesia?		
4.	Apakah adik-adik setuju jika aplikasi hewan khas pulau		

Indonesia dapat dijadikan media pembelajaran baru?

5. Menurut adik-adik apakah aplikasi ini bermanfaat untuk dipelajari?

Sumber: Hasil Penelitian (Tahun)

Tabel 2 menjelaskan tentang



Sumber: Hasil Pengolahan Data (Tahun)

Pada Tabel 2 dijelaskan tentang

D. Kesimpulan

Memberikan pernyataan bahwa apa yang diharapkan, seperti yang dinyatakan dalam bab "Pendahuluan" sampai bab "Hasil dan Diskusi", sehingga ada kompatibilitas. Selain itu dapat juga ditambahkan prospek pengembangan hasil penelitian dan prospek penerapan penelitian selanjutnya (berdasarkan hasil dan diskusi).

Ucapan Terima Kasih (Opsional)

Digunakan untuk menyampaikan ucapan terima kasih kepada pemberi hibah atau dana dan pihak yang telah bekerja sama atau memberikan kontribusi.

Daftar pustaka

Daftar Pustaka **wajib** disusun menggunakan Mendeley dengan gaya **American Psychological Association 7th edition** Pustaka yang digunakan merupakan pustaka mutakhir. Referensi utama adalah jurnal internasional dan prosiding dalam 5 tahun terakhir. Semua referensi harus yang

paling relevan dan sumber up-to-dat dan disusun berdasarkan urutan abjad. Referensi yang ditulis menggunakan Mendeley dalam gaya **American Psychological Association 7th edition**. Silakan gunakan format yang konsisten untuk referensi. Contoh:

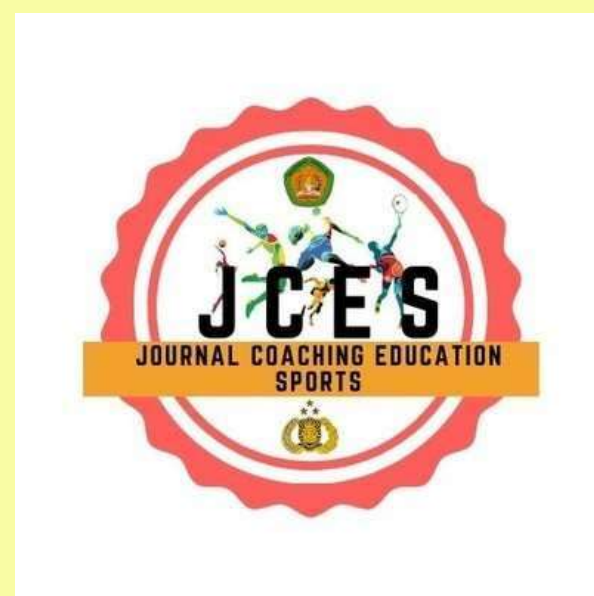
Handayanto, R., Tripathi, N. K., Kim, S. M., & Herlawati, H. (2018). Land Use Growth Simulation and Optimization for Achieving a Sustainable Urban Form. *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, 16(5), 2063–2072.

<https://doi.org/10.12928/telkomnika.v16i5.9309>.

Herlawati, Handayanto, R. T., & Solikin. (2018). Neural network regression with support vector regression for land-use growth prediction. *Proceedings of the 3rd International Conference on Informatics and Computing, ICIC 2018*. <https://doi.org/10.1109/IAC.2018.8780475>.

Pratiwi, E. S., & Herlawati, H. (2019). Sistem Informasi Penjualan Katering Berbasis Web Pada CV. Saung Alit Telaga Murni Cikarang Barat Eka. *INFORMATION SYSTEM FOR EDUCATORS AND PROFESSIONALS*, 03(2), 177–188. <http://ejournalbinainsani.ac.id/index.php/ISBI/article/view/1126>.

Yuliandari, D., Handayanto, R. T., & Herlawati, H. (2010). Structural Equation Modeling for Analyzing Factors That Influence Student and Women Lecturer Behavior in Using Facebook. *International Seminar of Information Technology*, 68–7.



Diterbitkan oleh:
Program Studi Pendidikan Kepelatihan Olahraga
Fakultas Ilmu Pendidikan
UNIVERSITAS BHAYANGKARA JAKARTA RAYA

Sekretariat Redaksi Journal Coaching Education Sports (JCES) Kampus II
Jl. Perjuangan No.81, Marga Mulya, Jawa Barat 17143
Telp: +62 21 88955882
E-mail: jcesport@ubharajaya.ac.id

