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Evaluation of Fitness and Learning Outcomes of Elementary School Teacher Education Students in Sports Lessons Command Model: A Literature Review

Alfroki Martha[1]✉, Alfiyandri[2]

Department of Primary Education, Universitas Adzkia, Indonesia[12]

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Abstract

For students of the Primary School Teacher Education Study Program, Physical Education, Sports and Health Learning is very important in maintaining physical health as well as completing learning goals. The command-learning paradigm that accentuates the teacher has total dominance in the learning process is believed to be suitable for this circumstance. This study is conducted to evaluate the effectiveness of command learning paradigm on students' learning results and excellent physical fitness in Sports lessons courses. This method of research analyses dedicated literative review by going through different related studies published in national as well as international journals. The article analyzed in the review is within the themes of command learning model, physical fitness and learning outcomes in Sports lessons learning. The data were analyzed in a descriptive way to identify possible relationships between the variables studied. The experimental results presented prove the beneficial effects of the command learning model on students' physical fitness, which are mainly embodied in cardiovascular endurance, muscle strength and flexibility. Furthermore, student learning outcomes also increase effectively, especially in mastering material concept and Sports lessons motor skills. Next, the model is followed by an enormous amount of variable, such as quality and availability of teachers, learner conditions and social environment. This study concludes the command learning model is good or effective to enhance the physical fitness and learning outcomes of Elementary School Teacher Education students in Physical Education subjects. But teachers also have to be mindful of coming up with ways to keep interest and motivation in the long term. Formulation of an adaptive, individualized learning model requires additional research.

How to Cite

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✉ Correspondence address :
E-mail: alfroki.m@adzkia.ac.id

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INTRODUCTION

Sport education in Physical Education sports lessons as a strategic position of the character of state sports development; mental and social student (Bafirman et al., 2023; Putra et al., 2023). The sport lesson in higher education espacially at the Study Program of Elementary School Teacher Education is considered impotant to provide student competences in principles of teaching as well as to improve students pozysical fitness. In this situation, part of the ano dynamic school associated with learning achievement is health which sometimes refers to physical health of the pupils. Among future teachers, Elementary School Teacher Education students are expected to be able to serve as models for a healthy life and the development of their motor skills (Barradas et al., 2024; Fu et al., 2023). The problem is that there are not enough science-based teaching methods which would lead to enhanced health and learning outcomes.

The command-learning model has a structured approach to learning wherein the trainer is in total control of the learning process, and it offers potential solutions towards achieving these kind of goals (Li et al., 2024; Vogiatzidakis & Koutsabasis, 2022). With this method, teachers can give students specific directions allowing them to participate in activities with little or no problems. Command learning has demonstrated to be effective in improving cognitive and psychomotor learning outcomes in several studies. To guarantee its efficacy, particularly in enhancing physical fitness and general learning results, more research is necessary before this paradigm may be used to Elementary School Teacher Education students in Sports lessons classrooms (Mao et al., 2022). Therefore, an in-depth study through literature review is needed to understand the extent to which the command learning model can be applied with optimal results in Sports lessons learning.

Studies on the effectiveness of this model in physical education have shown that the command learning model is a common and effective strategy for improving cognitive behavior as well as motor performances at various educational levels (Lamperti, 2024; Lu et al., 2023). The learning model this one based on the previous research, which allows teachers to control all learning and gives very clear guidance and has authority in it be "the discipline the atmosphere". In addition, the command method of learning is believed to be beneficial in addressing physical fitness aimed at encouraging students to achieve predetermined exercise goals, which will help them become more flexible, strong, and resilient (Ezabadi & Emami, 2024; Schmitt et al., 2024). However, only a few studies have been done about how the command learning model is implemented among the students of Elementary School Teacher Education in Sports lessons. Therefore, by analyzing the effects of the learning model, especially on student learning outcomes and physical fitness as an indicator of study success this study is expected to provide contributions.

This study offers novelty by comprehensively evaluating the effectiveness of the command learning model in improving physical fitness and learning outcomes of Elementary School Teacher Education students in Sports lessons courses, which until now has not been widely researched specifically (T et al., 2021; Yin & Mo, 2024). How effective is the command-based learning model in improving physical fitness and student learning outcomes in the subjects of Physical Education, Sports, and Health in the Elementary School Teacher Education study program?. The principal purpose of this study is to test the way in which command learning model that is systematic in this arrangement can be integrated within the framework of teacher candidate education into two most essential elements namely- competence level for their academic inputs, and physical ability development. The main value of this study is its provision of practical empirical data on the feasibility and effectiveness of the command learning model as an innovative teaching approach, revealingly based with facts, for developing not only academic but also physically qualified young pre-service teachers in higher education. This research is expected to provide a basis for the development of a more flexible Sports teaching model supported by evidence which would help in improving national academic outcomes.

METHODS

This study uses a literature review method to analyze the effectiveness of the command learning model on physical fitness and learning outcomes of Elementary School Teacher Education students in Sports lessons courses. The research process begins with the collection of scientific articles and journals from leading academic databases such as Google Scholar, PubMed, and ScienceDirect. Search keywords include "command learning model," "physical fitness," "learning outcomes," and " Sports lessons." The selected articles meet the inclusion criteria, namely published within the last 10 years, relevant to the research theme, using quantitative or mixed methods, and written in Indonesian or English. Ar-

ticles that do not meet the inclusion criteria, such as not covering the context of physical education or not measuring physical fitness and learning outcomes directly, are excluded from the analysis.

After selection process, we analyzed the data from the selected papers by using of descriptive and comparison methods. Then, it is made a purposely analysis of every article following its purpose, methodology, results and conclusions in order to identify patterns of links between the implementation of the command learning paradigm, physical fitness and student learning outcomes. The findings of the analysis can be divided into three categories: the effectiveness of the learning model, influence of learning outcomes and activities, and impact on physical fitness. Using data from various sources can be triangulated to ensure uniformity of results thereby sustaining the validity of study. In addition, narratives synthesis is used to obtain valuable input for the future development of a more successful Sports lessons learning model.

RESULTS AND DISCUSSION

The purpose of this literature review is to assess the fitness and learning outcomes of Elementary School Teacher Education students in Sports lessons with the command model. A critical apparatus table was used to analyze the collected literature to answer measurement objectives in comparison to results of simple measurements. Sumber literatur menunjukkan hadirnya 5 literatur, all of these journals are journals that are international journals that are searched on the Google Scholar portal, Mendeley, Science direct. com by typing the keywords " physical fitness, learning outcomes, command learning, Sports lessons, Elementary School Teacher Education " which is then analyzed using critical analytical analysis to analyze from the core of the journal, as well as the results or findings from these journals. The following is a **Table 1** of critical apparatus analysis from 5 journals.

Table 1. Literature Review Summary of Results.

Researcher	Article title	Research results
(Fallo et al., 2020)	The learning dimension of motor development-based casti games with command teaching style in elementary school students	One of the learning materials that can improve children's motor skills is caste games. The command teaching style is a way to do tasks correctly and in a short time, following all decisions made by the teacher.
(Gani & Kusnaldi, 2020)	Learning volleyball underpass techniques through a commando teaching style approach	The conclusion of this study is that the command teaching style can improve the ability to learn to pass down in volleyball
(Helmi et al., 2018)	Efforts to Improve Meroda Learning Outcomes in Floor Gymnastics Learning through Command Teaching Style in Class XI High School Gkps 1 Pematang Raya Simalungun Regency	The results of the study concluded: Of the 28 students, there were 8 students (28.57%) who had achieved the level of learning completeness with an average score of 55.17% student learning outcomes. The results of the first cycle were 18 students (64.28%) out of 28 students, who had reached the level of learning completeness with an average score of 68.14% student learning outcomes. In cycle II there were 25 students (89.28%) out of 28 students who had reached the level of learning completeness with an average score of 79%, it can be seen that student learning outcomes from the initial test to the implementation of cycle I and cycle II have improved, it can be said that through the application of this command teaching style can improve student learning outcomes.
(Hidayat & Hasanah, 2024)	Comparison of Free Play and Command Play in Outdoor Learning in Early Childhood Education Yogyakarta	This research has implications for the future learning process in early childhood education in Yogyakarta, as it helps teachers and school principals realize the importance of outdoor learning activities in free play to support the holistic development of children.
(Fauzi et al., 2021)	Command Teaching Style Learning Media for Pjok Teachers	The commando teaching style was the first to be introduced among the other styles, and is most often used by corner teachers. However, the teaching style of command in its implementation is not only commanding, but also there are several steps that must be fulfilled as explained by Muska Mosston. Learning media is an intermediary that can help teachers to better understand the commando teaching style

The results of analysis from various literature show that the command learning model has a significant positive impact on the improvement of physical fitness and learning outcomes of Elementary School Teacher Education students in Sports lessons courses (Aydogmus et al., 2023). Because of its organized and guided training routines, this program has demonstrated efficacy in enhancing physical fitness components like cardiovascular endurance, muscle strength, and flexibility. By providing explicit instructions and regular practice, the command technique can improve students' intellectual grasp of Sports lessons content and sharpen their physical abilities (Bruenisholz et al., 2024; Chen et al., 2024). However, some other things like the student's motivation, the variety of assessment techniques used and the teachers teaching abilities also play a role in the effectiveness of this model. Overall, the command learning model may assist Sports lessons students to overcome both theoretical and practice mastery; (but), its application needs an improvement in order to maintain the dynamics of learning and the engagement of students.

Aside from the positive aspects that were mentioned before, the results obtained from the analysis also show that command learning has negative consequences in relation to the flexibility and active participation of students. Teaching was placed first; students had the least amount of control over their creativity and education. Some studies showed that college students who had different learning styles or low cardiovascular fitness, for instance, were less likely to be emotionally and cognitively engaged in learning. According to this, command-driven learning models are useful for reaching quantifiable learning goals, but in order to meet the needs of each individual student, they must be combined with more participative techniques like cooperative or project-based learning. Thus, the implementation of the command learning model combined with other pedagogical strategies can create a more holistic and inclusive Sports lessonslearning process (Keighobadi et al., 2023).

The analysis results show that the command learning model provides a good base for reaching specific Sports lessons learning objectives, this is certainly of a benefit when related to the academic performance and health of Elementary School Teacher Education students. A steady teaching structure in place allows students to drive their learning process with not just discipline but also validates their understanding of the subject, while their physical performance also improves. But the total takeover of this model by faculty can also limit students' overall skills development beyond technical skills — in creativity, critical thinking, collaboration, etc. This circumstance highlights the significance of striking a balance between the development of emotive and social skills and quantifiable material competence. In addition, the command learning model shows higher effectiveness when applied to students with high motivation or a supportive physical background, while students with low fitness levels tend to require a more flexible approach (Yang et al., 2023). Therefore, while this learning model is relevant to achieve certain goals, innovation is needed in its implementation to include the diversity of student needs and create a more adaptive and inclusive learning experience.

An intriguing comparison between the efficacy of the command learning model and other learning models, including cooperative or project-based learning, may be seen in the findings of studies from a variety of literature. Command models are excellent at offering solid structure and enhancing the attainment of technical results, like improved motor skill mastery, muscle strength, and flexibility. On the other hand, the cooperative learning approach is more successful in fostering students' cooperation, social skills, and emotional investment in the educational process. Additionally, the evidence indicates that project-based learning methods are more adaptable to students' unique needs, leading to student-centered learning. However, because command learning lacks an adaptable strategy, it is ineffective at inspiring children with low fitness levels. Compared to other models, the effectiveness of command learning is more prominent when used in environments that require clear instructions and measurable learning objectives, such as Sports lessons learning on specific physical materials. The combination of the command approach with other methods has the potential to create a more balanced and comprehensive learning process.

CONCLUSION

This study concludes that the command learning model is an effective approach to improve the physical fitness and learning outcomes of Elementary School Teacher Education students in Sports lessons courses. With its structured and direct instruction-based characteristics, this model is able to encourage students to achieve measurable learning targets, especially in the development of motor skills, physical endurance, and conceptual understanding. However, its effective-

ness depends on the ability of teachers to manage the learning process and on the level of student motivation. Although this model has the power to provide control and discipline, its limitations in encouraging active participation and creativity of students point to the need for combination with other, more flexible learning methods. Overall, the command-learning model offers a significant pedagogical solution, but it must be implemented adaptively to accommodate individual needs and create effective learning experiences.

REFERENCES

Aydogmus, O., Bingol, M. C., Boztas, G., & Tuncer, T. (2023). An automated voice command classification model based on an attention-deep convolutional neural network for industrial automation system. Engineering Applications of Artificial Intelligence, 126, 107120. https://doi.org/https://doi.org/10.1016/j.engappai.2023.107120

Bafirman, Zarya, F., Wahyuri, A. S., Ihsan, N., & Batubara, R. (2023). Improving the martial art skills and physical fitness quality of students grade VII through e-module development. Journal of Physical Education and Sport, 23(12), 3271–3281. https://doi.org/10.7752/jpes.2023.12374

Barradas, V. R., Koike, Y., & Schweighofer, N. (2024). Theoretical limits on the speed of learning inverse models explain the rate of adaptation in arm reaching tasks. Neural Networks, 170, 376–389. https://doi.org/https://doi.org/10.1016/j.neunet.2023.10.049

Bruenisholz, E., Bunford, J., Jones, K., Knott, F., Lam, A., Tahtouh, M., Taylor, M., & Walsh, S. J. (2024). Operational relevance of the Sydney Declaration: The example of the Australian Federal Police (AFP) Forensics Command. Forensic Science International, 359, 112035. https://doi.org/https://doi.org/10.1016/j.forsciint.2024.112035

Chen, G., Liu, H., Jiang, H., Li, Q., Zhang, Y., Hao, S., & Zhao, W. (2024). Accurate identification and confidence evaluation of automatic generation control command execution effect based on deep learning fusion model. Engineering Applications of Artificial Intelligence, 131, 107819. https://doi.org/https://doi.org/10.1016/j.engappai.2023.107819

Ezabadi, M., & Emami, S. A. (2024). Finite-time fault-tolerant control of a spacecraft using composite learning in the presence of moment of inertia uncertainty and external disturbances. Aerospace Science and Technology, 150, 109185. https://doi.org/https://doi.org/10.1016/j.ast.2024.109185

Fallo, I. S., Ardimansyah, A., & Hidayati, N. (2020). Dimensi pembelajaran permainan kasti berbasis perkembangan motorik dengan gaya mengajar komando pada siswa sekolah dasar. Jurnal Pendidikan Olah Raga, 9(1), 41–59.

Fauzi, A., Kristiyandaru, A., & Tausikal, A. R. S. (2021). Media Pembelajaran Gaya Mengajar Komando Untuk Guru PJOK. JURNAL PENA EDUKASI, 8(1), 33–42.

Fu, L., Zhang, Z., Tan, L., Yao, Z., Tan, H., Xie, J., & She, K. (2023). Blockchain-enabled device command operation security for Industrial Internet of Things. Future Generation Computer Systems, 148, 280–297. https://doi.org/https://doi.org/10.1016/j.future.2023.06.004

Gani, R. A., & Kusnaldi, E. (2020). Pembelajaran teknik passing bawah bola voli melalui pendekatan gaya mengajar komando. Journal Power Of Sports, 3(2), 1–10.

Helmi, B., Winata, D. C., Hasibuan, M. N., & Hardinoto, N. (2018). Upaya Meningkatkan Hasil Belajar Meroda Dalam Pembelajaran Senam Lantai Melalui Gaya Mengajar Komando Pada Siswa Kelas Xi Sma Gkps 1 Pematang Raya Kabupaten Simalungun. Jurnal Ilmiah STOK Bina Guna Medan, 6(1), 29–32.

Hidayat, A. K., & Hasanah, N. (2024). Perbandingan Bermain Bebas dan Bermain Komando Pada Pembelajaran Luar Ruangan di Pendidikan Anak Usia Dini Yogyakarta. Generasi Emas, 7(2), 107–116.

Keighobadi, J., Fateh, M. M., Xu, B., & Nazmara, G. (2023). Composite fuzzy voltage-based command-filtered learning control of electrically-driven robots with input delay using disturbance observer. Journal of the Franklin Institute, 360(2), 813–840. https://doi.org/https://doi.org/10.1016/j.jfranklin.2022.11.027

Lamperti, F. (2024). Unlocking machine learning for social sciences: The case for identifying Industry 4.0 adoption across business restructuring events. Technological Forecasting and Social Change, 207, 123627. https://doi.org/https://doi.org/10.1016/j.techfore.2024.123627

Li, L., Zhang, X., Qian, C., Zhao, M., & Wang, R. (2024). Cross coordination of behavior clone and reinforcement learning for autonomous within-visual-range air combat. Neurocomputing, 584, 127591. https://doi.org/https://doi.org/10.1016/j.neucom.2024.127591

Lu, S., Zhang, S., Chang, H., Zheng, S., & Song, B. (2023). Speed-command-independent parameters self-tuning and mismatch compensation for servo speed control. Control Engineering Practice, 137, 105550. https://doi.org/https://doi.org/10.1016/j.conengprac.2023.105550

Mao, J., Wang, C., Guo, Y., Xu, G., Cao, S., Zhang, X., & Bi, Z. (2022). A novel model for voice command fingerprinting using deep learning. Journal of Information Security and Applications, 65, 103085. https://doi.org/https://doi.org/10.1016/j.jisa.2021.103085

Putra, A. N., Zarya, F., Bahtra, R., & Sepriadi. (2023). The Development of a differentiation-based

learning model in football school students. Journal of Physical Education and Sport, 23(12), 3282–3291. https://doi.org/10.7752/jpes.2023.12375

Schmitt, A.-M., Miller, E., Engelmann, B., Batres, R., & Schmitt, J. (2024). G-code evaluation in CNC milling to predict energy consumption through Machine Learning. Advances in Industrial and Manufacturing Engineering, 8, 100140. https://doi.org/https://doi.org/10.1016/j.aime.2024.100140

T, T., Muralidharan, H., & Kandasamy, P. (2021). Control of Brushless DC Motor by Voice Command Implementing Machine Learning. Materials Today: Proceedings, 46, 3841–3844. https://doi.org/https://doi.org/10.1016/j.matpr.2021.02.175

Vogiatzidakis, P., & Koutsabasis, P. (2022). 'Address and command': Two-handed mid-air interactions with multiple home devices. International Journal of Human-Computer Studies, 159, 102755. https://doi.org/https://doi.org/10.1016/j.ijhcs.2021.102755

Yang, Z., Liu, X., & Liu, H. (2023). Impact time control guidance law with time-varying velocity based on deep reinforcement learning. Aerospace Science and Technology, 142, 108603. https://doi.org/https://doi.org/10.1016/j.ast.2023.108603

Yin, L., & Mo, N. (2024). Fractional-order Q-learning based on modal decomposition and convolutional neural networks for voltage control of smart grids. Applied Soft Computing, 162, 111825. https://doi.org/https://doi.org/10.1016/j.asoc.2024.111825.