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HOT SEAT STRATEGY TO IMPROVE SPIKE ACCURACY, CONFIDENCE AND MOTIVATION IN VOLLEYBALL LEARNING

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ABSTRACT

This study aims to analyze the effect of using the "Hot Seat" teaching strategy in improving the accuracy of high school students in volleyball spiking skills. This study also highlights how the strategy plays a role in improving students' self-confidence and motivation, in line with the increasing attention to the importance of active learning engagement in physical education. The main objectives of this study were to assess the effectiveness of the "Hot Seat" strategy in improving the accuracy of volleyball spiking performance and building students' self-confidence and evaluate its effect on motivation to achieve. The research method used an experimental design. The study sample consisted of 40 students who were randomly divided into two groups, and the data were analyzed using SPSS software to compare the results between groups. The results showed that the experimental group experienced significant improvements in all measured variables, including spike accuracy, self-confidence, and achievement motivation, when compared to the control group. The interactive "Hot Seat" strategy was shown to encourage critical thinking and active learning, resulting in deeper understanding and significant improvements in skill performance. Conclusion, the "Hot Seat" approach is an effective strategy in improving technical performance as well as psychological attributes of students in the process of learning sports education, and is able to transform students from passive recipients of information into active learners.
Keywords:hot seat strategy; spike accuracy; confidence; active learning; volleyball

STRATEGI HOT SEAT UNTUK MENINGKATKAN AKURASI, MENINGKATKAN KEPERCAYAAN DIRI, DAN MOTIVASI DALAM PEMBELAJARAN BOLA VOLI

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh penggunaan strategi pengajaran 'Hot Seat' terhadap keakuratan keterampilan spike bola voli siswa SMA. Studi ini juga menyoroti peran strategi tersebut dalam meningkatkan kepercayaan diri dan motivasi siswa, sejalan dengan semakin meningkatnya kesadaran akan pentingnya pembelajaran aktif dalam pendidikan olahraga. Tujuan utama dari penelitian ini adalah untuk menilai efektivitas strategi 'Hot Seat' dalam meningkatkan akurasi spiking performance bola voli, membangun kepercayaan diri siswa, dan mengevaluasi pengaruhnya terhadap motivasi. Penelitian ini menggunakan desain eksperimental. Sampel penelitian terdiri dari 40 mahasiswa yang secara acak dibagi menjadi dua kelompok. Data dianalisis menggunakan perangkat lunak SPSS untuk membandingkan hasil antara kedua kelompok. Hasil penelitian menunjukkan bahwa kelompok eksperimen mengalami peningkatan yang signifikan pada semua variabel yang diukur, termasuk akurasi lonjakan, kepercayaan diri dan motivasi berprestasi, dibandingkan dengan kelompok kontrol. Strategi 'Kursi Panas' interaktif telah terbukti mendorong pemikiran kritis dan pembelajaran aktif, menghasilkan pemahaman yang lebih dalam dan peningkatan kinerja keterampilan. Kesimpulannya, pendekatan 'Hot Seat' merupakan strategi yang efektif untuk meningkatkan kinerja teknis dan atribut psikologis siswa dalam proses pembelajaran pendidikan olahraga, mengubah mereka dari penerima informasi pasif menjadi pembelajar aktif.
Keywords:*hot seat strategy; spike accuracy; confidence; active learning; volleyball*

INTRODUCTION

Learning volleyball requires teaching that is able to develop technical skills while building student motivation and self-confidence (Muslimin et al., 2020; Yulianti & Fadillah, 2024). The paradigm shift in education emphasizes more on active and collaborative learning, where teachers are

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required to adopt innovative approaches that can improve the effectiveness of the teaching and learning process. One of the challenges in teaching volleyball is how to create a fun, competitive atmosphere that can involve students' activeness in the learning process (Competition, 2023).

The Hot Seat strategy is an innovative approach that utilizes healthy competition and interaction between students to increase engagement and accuracy in learning. This strategy is able to improve execution skills such as passing in volleyball. On the other hand, cooperative approaches such as the STAD (Student Teams-Achievement Divisions) model have also proven effective in improving students' technical abilities and motivation (Susila, 2022).

Accuracy training needs to be improved with different teaching methods, one of which is the hot seat strategy, where students are in the hot seat and are assigned to spike to a certain target area on the field that has been determined randomly (Krzysztofik et al., 2021; Sanati et al., 2022). Team members provide strategic input, such as jumping technique, shot angle, and selection of empty target areas. Teachers also utilize fixed target aids to help students practice shot direction precision. This exercise encourages students to focus on technique and quick decision making, which has a direct impact on increasing spike accuracy.

The Hot Seat strategy also contributes to increasing students' self-confidence. Because students sitting in the hot seat have to make decisions and are responsible for the results of their shots, they are encouraged to be more courageous and believe in their own abilities. The positive atmosphere created through verbal support and strategies from teammates also strengthens students' self-confidence. Previous research has shown that self-confidence is an important factor in the ability to spike, because confident players tend to be calmer, braver, and able to execute attacks optimally (Asrori, 2021; Trpkovici et al., 2025).

The motivational aspect of the Hot Seat model is both competitive and collaborative, creating challenges that motivate students to perform at their best. Teachers can add reward elements, such as giving points or prizes, to increase student enthusiasm and engagement in the learning process (Østerlie et al., 2023; Wijayanti et al., 2024). Modification of volleyball learning with the Hot Seat approach has been proven to significantly increase students' learning motivation in Physical Education, Sports, and Health subjects.

The study was conducted by dividing students into small groups. Each group took turns placing one member in the Hot Seat position. Students in this position spiked to a predetermined target, receiving input from teammates. After one turn was completed, the Hot Seat position was transferred to another member of the group. The teacher then provided feedback on the accuracy of the spike and the effectiveness of the team's strategy, while also giving awards to encourage learning enthusiasm.

Overall, the Hot Seat strategy has a positive impact on three important aspects of volleyball learning. First, in the aspect of spike accuracy, this strategy helps students practice focusing on the target and improving the accuracy of the shot (Baena-Raya, 2021; Xu, 2021). Second, from the self-confidence side, Hot Seat encourages courage, a sense of responsibility, and initiative in making decisions (Liu & Li, 2024; Þorgeirsson et al., 2023). Third, in terms of motivation, this model increases student involvement and creates a competitive yet enjoyable learning atmosphere (Kurniawati, 2023; Suwarjo et al., 2022). Therefore, Hot Seat is an effective and innovative approach in improving the quality of volleyball learning in the school environment.

The Hot Seat strategy and cooperative learning model are essentially based on the theory of social constructivism, where the learning process is seen as more effective when students are actively involved in discussions, reflections, and interactions with peers. This type of learning not only improves technical understanding, but also builds students' self-confidence and social skills. The

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STAD approach provides opportunities for students to work in teams, share responsibilities, and support each other, all of which contribute to improved learning outcomes (Esminarto et al., 2016).

Although there have been many studies examining the effectiveness of the STAD model and the Hot Seat strategy separately, there are still limited studies that explicitly combine the two in the context of volleyball learning to see their synergistic impact on students' technical skills and learning motivation. This study offers a new approach by combining the Hot Seat strategy and STAD cooperative learning, which has not been widely explored in previous studies, especially in the context of passing skills in volleyball. This study aims to analyze the effect of implementing the Hot Seat strategy combined with the STAD cooperative learning model on improving students' passing skills and learning motivation in volleyball learning at the secondary school level.

METHOD

This study uses an experimental method with a two-group design, namely the experimental group and the control group (Agustini Raaiyatini et al., 2024). The research design used was a pretest-posttest control group design, which aims to evaluate the effectiveness of the "Hot Seat" learning strategy in improving students' overhand spike skills, self-confidence, and achievement motivation (Aliriad, 2023). This study was conducted at Qamar Ibn Hashim School with a population of all 80 students in grade 1 of high school. The research sample of 40 students was selected randomly, then divided evenly into two groups: 20 students in the experimental group and 20 students in the control group. A preliminary study was conducted on 15 students from the same population to test the feasibility of the measuring instrument and learning strategies used.

Before the treatment was given, the researcher conducted a homogeneity and initial equivalence test between the two groups by analyzing the variables of height, weight, and spike skills using the coefficient of variation and t-test. The experimental group was given treatment in the form of a "Hot Seat" learning strategy, while the control group followed the standard learning program from the Ministry of Education. Data collection techniques were carried out through several instruments, namely the overhand spike skill test which was carried out five times for each student, the Al-Ghamdi Self-Confidence Scale, and the Achievement Motivation Scale. These three instruments have been proven valid and reliable. The Self-Confidence Scale showed a reliability of 82% and a validity of 77%, while the Achievement Motivation Scale had a reliability of 77% and a validity of 80%. These figures have met the minimum standard of 70% which is commonly used in social and educational research.

This study uses a pretest-posttest design with observations to ensure the "Hot Seat" strategy is applied according to the procedure. The Data were analyzed using SPSS with descriptive statistics (mean and standard deviation) and a t-test to test for significant differences between groups. Validity and reliability tests were also conducted. Procedures include preliminary study, random sample selection, homogeneity test, pretest, intervention, observation, posttest, and data analysis. This approach aims to illustrate the effectiveness of the "Hot Seat" strategy in improving learning outcomes and psychological aspects of students.

FINDINGS AND DISCUSSION

Based on the applied experimental method, the results of the study indicate that the application of the Hot Seat learning strategy has a significant positive impact on improving students' overhand spike skills, self-confidence, and achievement motivation. The results are arranged in the form of tables and discussions in each learning strategy. The results of the study in Table 1 present the results

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of the pre-test and post-test mean scores for the experimental group in terms of overhand spike performance accuracy. The data show that the post-test mean score significantly increased compared to the pre-test, reflecting the positive impact of the implementation of the Hot Seat Strategy.

Table 1. Comparison of Pre-Test and Post-Test Results

Group	Test Type	Mean	Standard Deviation	t-Test Value	Degrees of Freedom	Significance (p-value)
Experimental	Pre-Test	1.25	1,517	-	-	-
	Post-Test	12.10	2.382	16,589	19	0.000
Control	Pre-Test	1.20	1.39	-	-	-
	Post-Test	5.50	1.60	11.83	19	0.000

The t-test results for this group showed a t-value of 16.58 at n-1 degrees of freedom with a significance level of 0.05, which far exceeds the tabulated t-value of 2.093. This indicates a statistically significant relationship between performance improvement and the use of the Hot Seat Strategy, thus supporting the researcher's alternative hypothesis. Meanwhile, the control group also showed an increase in the mean score on the post-test compared to the pre-test, with a calculated t-value of 11.83 which is also higher than the tabulated value of 2.093, indicating a significant increase in performance although not as large as the experimental group. Overall, the p-values for both groups are below the significance threshold of 0.05, so the results are statistically acceptable and indicate the effectiveness of the intervention in both groups, with a greater advantage in the experimental group.

The “Hot Seat "learning strategy applied in this study proved to be effective in improving the accuracy of students' overhand spike performance more significantly than conventional methods. Through an active approach that puts students in a direct question-and-answer situation, this strategy encourages full engagement, increasing concentration, courage, as well as quick and in-depth understanding of concepts. As a result, students in the experiment group showed a more comprehensive improvement, both from technical and psychological aspects of movement such as self-confidence and mental readiness. Meanwhile, the control group also improved, but not as strongly as the group that received the “Hot Seat” intervention, indicating that this strategy was able to have a greater impact on learning outcomes and student engagement.

Table 2. Comparison of the Mean Overhand Spike Accuracy

Test	Mean	Sample Size	Standard Deviation	t-Test Value	Degrees of Freedom	Model Significance (p-value)
Experimental	12.10	20	2.382	11,336	19	0.000
Control	5.50	20	1,606	-	-	-

Table 2 shows that the mean post-test score of the experimental group (12.10) was significantly higher than that of the control group (5.50), reflecting a greater improvement in performance in the group receiving the Hot Seat strategy intervention. This difference shows a positive statistical indication of the strategy’s effectiveness in improving overhand spike accuracy. The t-test results also support this conclusion, where the calculated t-value of 11.33 exceeds the tabulated t-value of 2.093 at the same level of significance and degrees of freedom. Thus, the null hypothesis stating that there is no significant difference between the two groups is rejected, and the alternative hypothesis is accepted. This confirms that there is a statistically significant difference between the experimental and control groups in terms of overhand spike accuracy after the treatment was given.

The results of the study in table (3) found significant differences that only benefited the experimental group in the post-test. This increase was associated with the implementation of the Hot Seat Strategy, which is widely recognized as an effective approach to exploring in-depth topics and delivering important concepts interactively. In this strategy, questions are asked dynamically between students and between students and teachers, with a centralized focus on issues or topics that have been agreed upon together.

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Table 3. Results of the Self-Confidence t-Test

Test	Mean	Sample Size	Standard Deviation	t-Test Value	Degrees of Freedom	Model Significance (p-value)
Experimental - Pre-Test	31.30	20	6.292	-	-	-
Experimental - Post-Test	46.55	20	4.979	11,336	19	0.000

This approach not only improves the ability to dialogue, but also encourages active intellectual engagement among students. The Hot Seat Strategy is used to identify root causes, meet students' needs for deeper understanding, and develop higher-order thinking skills through problem solving or mastery of important concepts.(Giatsis, 2022; Ritonga et al., 2022). Self-confidence, defined by Shrauger as an individual's perception of his or her competence and ability to deal effectively with life's challenges, is an important aspect of personal development. The Hot Seat strategy supports the strengthening of this aspect by encouraging students to actively think, speak, and participate meaningfully, thus building self-confidence in both academic and practical areas.

Figure 1. Average Score of Control Group on Pre-Test and Post-Test of Self-Confidence

The results for the control group showed inconsistency and lack of coherence, as physical education lessons in this context tended to rely entirely on teacher direction, with no opportunity for students to engage in discussions, express opinions, or participate in dialogue. This limited their opportunities to develop important skills, such as self-confidence. As stated, "A person who lacks self-confidence risks missing out on many opportunities because they are afraid to take risks or are worried about the possible consequences." Many studies have shown that self-confidence is not an innate trait, but rather something that can be learned and developed.

Table 4. Comparison of Average Values of Achievement Motivation

Group	Types of Tests	Mean	Sample Size	Standard Deviation
Experimental	Pre-Test Motivation	25.45	20	4.605
Experimental	Post Test Motivation	49.80	20	5.238
Control	Pre-Test Motivation	25.30	20	4.450
Control	Post Test Motivation	31.55	20	4.019

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Therefore, self-confidence can be improved through the development of skills such as actively listening to others, seeking to understand their intentions positively, cultivating courage, and supporting individuals in fulfilling their responsibilities in a constructive way. This emphasizes the importance of creating a more interactive educational environment, where students are given the space to participate and interact meaningfully, so that they can build self-confidence more effectively.

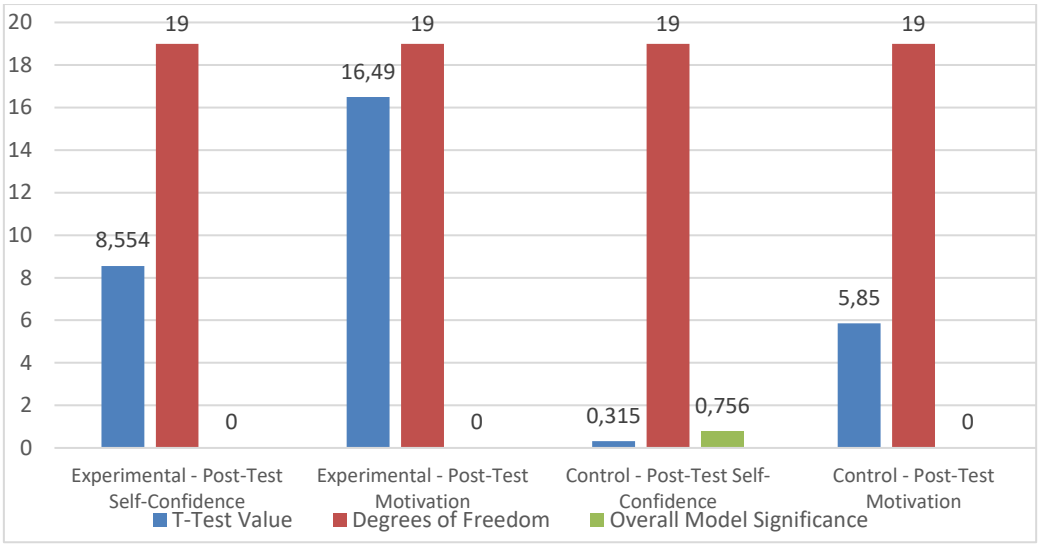

Figure 2. T-Test Values of Both Groups Self-Confidence and Achievement Motivation

Based on the results illustrated above, it is clear that there is a significant difference in favor of the experimental group. This improvement can be attributed to the strategies implemented, which transform learners from passive listeners to active participants who apply, analyze, and evaluate the knowledge given to them.The results of the study through discussions with their peers, students are involved in activities that require them to think critically about the information provided and explore how to use it in new educational contexts. Knowledge with environmental experience can increase learning motivation(Cheung et al., 2022; Zhang et al., 2024). The use of strategies in the learning process can increase motivation, provide greater opportunities to transfer educational experiences to new contexts, strengthen targeted knowledge, and expand learning tasks.(Castro, 2022; Probo Ismoko & Putro, 2023; Weldon, 2021). The researcher emphasized the importance of adopting modern teaching methods, including the Hot Seat Strategy, as it plays a vital role in stimulating students' minds to generate ideas and engage in brainstorming activities. This approach not only boosts their self-confidence but also motivates them to perform and excel in the tasks assigned to them.

The results of this study showed a significant difference between pre-test and post-test scores in both the experimental and control groups, with a more prominent increase in the experimental group. This increase was directly related to the implementation of the Hot Seat Strategy which was carried out consistently, according to the curriculum, and supported by repeated training. This is in line with the principle of learning that performance improvement can be achieved if teachers apply systematic steps that emphasize correct and consistent practice until skills become stable.

The post-test score of the overhand spike of the experimental group was significantly higher than that of the control group. This shows the effectiveness of the Hot Seat Strategy in encouraging students to think critically, face challenges, and understand skills in depth. The implementation of this approach allows the subject matter to be delivered progressively, so that students can absorb and apply it more easily.(Iorfino et al., 2024; Sun, 2021).

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Performance improvement is also supported by the basic characteristics of sports skills such as overhand spikes that require repeated practice, attention to motor details, and habituation through structured training. The Hot Seat strategy, which involves discussions between students and teachers, helps students recognize errors and correct them through reflection and feedback. The incorporation of static to dynamic movements and the arrangement of exercises from simple to complex tasks further strengthen the understanding and execution of skills.

In addition to encouraging cognitive aspects, this strategy also increases engagement and collaboration between students, making them active participants in the learning process. As a result, students not only understand the technical aspects of the overhand spike, but are also able to perform it efficiently without unnecessary movements, thereby increasing accuracy in a limited time. The principles of repetition and practice applied also encourage skill mastery, increasing precision, competitive spirit, and dynamic performance. Precision is an important aspect in overhand spikes because it directly affects the ability to score points. Without precision, power and speed become less meaningful. Therefore, the significant improvement achieved by the experimental group in the overhand spike accuracy test proves that an effective, interactive, and structured learning strategy is able to provide more optimal learning outcomes than conventional methods.

CONCLUSION

This study shows that the "Hot Seat" learning strategy is effective in improving volleyball overhand spike skills, as well as improving students' self-confidence and motivation. The experimental group using this strategy showed significant improvements compared to the control group, both in technical skills and psychological aspects. Based on these findings, it is recommended that physical education teachers can integrate the "Hot Seat" strategy into their teaching methods to improve student engagement and performance. Schools should also prioritize the implementation of active learning strategies that support the development of students' self-confidence and motivation. Limitations This study was a small sample size and focused on volleyball skills, which limits the generalizability of the results. Further research can involve a larger and more diverse population. Practically, the results of this study can be applied in physical education curriculum, teacher training, and the development of students' psychological attributes, with the adaptation of the hot seat strategy to various sports and collaborative learning situations.

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