JSES: Journal of Sport and Exercise Science
Volume 9, Number 1, March 2026
ORIGINAL ARTICLE

Efforts to Improve Pencak Silat T-Kick Skills Using the Drill Methods in School Extracurricular Activities

Majesta Wahyu Aisha[1ABCD], I Gede Dharma Utamayasa[2ABCD], Angga Indra Kusuma[3ABCD], Yanyong Phanpheng[4ACD], Ronald Dwi Ardian Fufu[5CD]

[1] Universitas PGRI Adi Buana Surabaya, Indonesia
[2] Loei Rajabhat University,Thailand
[3] Universitas PGRI Jombang, Indonesia

Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection.

Corresponding Author: I Gede Dharma Utamayasa, dharmautamayasa@unipasby.ac.id

Received	25 February 2026
Accepted	17 April 2026
DOI	https://doi.org/10.26740/jses.v9n1.p49-56

ABSTRACTS

Purpose	This study aimed to improve T-kick skills in Pencak Silat among students at Ta'Miriyah Surabaya High School through the drill method. The T-kick is a fundamental technique requiring precision, coordination, and consistency. The drill method was selected due to its emphasis on repetitive and focused practice, allowing students to refine specific technical components effectively.
Materials and Methods	A quantitative experimental design was applied, involving 20 students participating in the Pencak Silat extracurricular program. The training program lasted six weeks, with sessions conducted twice weekly. To measure improvement, students were assessed using a pre-test before the intervention and a post-test after completing the training. Data were analyzed using descriptive statistics and a paired t-test to determine the significance of differences between pre- and post-test results.
Result	The findings indicated a significant improvement in students' T-kick performance following the drill-based training. This enhancement was reflected in better accuracy, speed, and overall execution of the technique. The average pre-test score increased from 30.92 to 34.17 in the post-test. Statistical analysis yielded a p-value of 0.000, confirming a statistically significant difference between the two measurements.
Conclusion	The drill method proved effective in enhancing T-kick skills among high school students. The structured and repetitive nature of this approach supports skill acquisition and technical mastery in martial arts training. This study highlights the importance of targeted training methods and provides practical implications for coaches and educators in developing students' fundamental Pencak Silat techniques at the school level.
Keywords	T-kick skills; Pencak Silat; Drill method; Extracurricular activities; Skill improvement.

INTRODUCTION

Pencak Silat is a traditional martial art of Indonesia that has been passed down through generations and is deeply rooted in the community. Pencak Silat competitions can be categorized into four types: match category, individual category, pair category, and team category (Perwira, 2022). The T-kick is

a technique that involves using one leg and foot, with a straight trajectory forward, striking with the heel, sole, and outer side of the foot, typically used for side attacks targeting various parts of the body (Ismoyo, 2014). However, in practice, many students still demonstrate a stiff and inefficient execution of the T-kick technique. This is attributed to a lack of concentration during training, a misunderstanding of the correct technique, and insufficient application of effective training methods. The low proficiency in the T-kick, particularly among Pencak Silat students at Ta'Miriyah Surabaya High School, is the focus of this research. Therefore, the researcher proposes a new method, namely the drill method, which is expected to enhance students' abilities. The drill method provides opportunities for learners to practice specific skills based on explanations or instructions from teachers or coaches (Tambak, 2016). This method emphasizes mastering techniques through repeated movements that align with instructions, leading to the automation of these movements (Astuti, 2017). Relevant theories for this research include motor learning concepts and training techniques in sports. According to motor learning theory, physical skills can be improved through structured repetitive practice, allowing students to internalize movements and enhance accuracy and execution speed. The drill method, which focuses on the repetition of specific techniques, has proven effective in improving motor skills, including in martial arts contexts like Pencak Silat. By applying the drill method, students are expected to refine their T-kick technique, improve concentration, and develop confidence in executing these movements.

Previous studies have explored various training methods in Pencak Silat; however, many have not specifically addressed the effectiveness of training methods in enhancing T-kick skills in Pencak Silat. Research conducted by Firdaus et al. (2020) indicates that the drill method can enhance students' kinesthetic intelligence in sports contexts, but it does not specifically examine its impact on the T-kick technique in Pencak Silat. Additionally, Kusnadi & Hartadji (2015) emphasizes the importance of structured training methods but does not provide empirical evidence regarding the effectiveness of the drill method in improving specific skills like the T-kick. This difference is significant as it highlights that, despite numerous studies on training techniques in sports, there remains a lack of understanding of how the drill method can specifically enhance T-kick skills among students. While some research has shown improvements in martial arts skills generally through varied training techniques, there is still a lack of focused studies analyzing the specific impact of drill-based training on T-kick proficiency. This gap is crucial as it underscores the need for targeted interventions that can yield measurable improvements in specific techniques, thereby enhancing overall performance in martial arts competitions.

This research is vital as it focuses on skill enhancement to create effective training in Pencak Silat through the T-kick for students at Ta'Miriyah Surabaya High School. The urgency of this research stems from the need to provide effective solutions for improving students' abilities, which can contribute to their success in competitions. The novelty of this research lies in the specific application of the drill method for the T-kick technique, which has not been extensively studied in the context of Pencak Silat, thus offering a new approach to more focused training. The objective of this research is to evaluate the effectiveness of the drill method in improving T-kick skills among students and to provide empirical evidence that can be used to enhance existing training methods.

METHODS

Research Design

This study applied a quantitative experimental design with a pre-test/post-test approach to evaluate the effectiveness of training methods in improving T-kick performance. The research process took

place in several systematic stages. The first stage involved a pre-test to measure the participants' initial ability to perform T-kicks. Next, the participants were divided into two groups: an experimental group and a control group. The experimental group underwent training with a specialized method designed to optimally improve the T kick technique. This method emphasized consistent repetition of movements, correction of kick form, and optimization of technique execution to make it more efficient. Meanwhile, the control group underwent conventional training with no special intervention. After six weeks of intensive training, a post-test was conducted to assess the development of T-kick skills in both groups.

Study Participants

This study involved 20 students in the Pencak Silat extracurricular program at SMA Ta'Miriyah Surabaya. The participants were between 15 and 17 years old and included both male and female students. Selection criteria for participants included being actively enrolled in the Pencak Silat extracurricular activities and having a willingness to participate in the study. Students who had prior experience in martial arts or had undergone specialized training in Pencak Silat were excluded to ensure a focus on the effectiveness of the drill method for beginners.

Data Collection

In pencak silat training, there are several tests or exams to assess the skill in executing the T kick. Some tests that can be done to assess the ability of a T kick in pencak silat include:

Target Accuracy

This test tests the ability of a silat athlete to hit a target with a T kick. The silat athlete is asked to kick at a predetermined target point, either a target on the opponent's body or another target.

Strength and Speed

This test aims to assess how strongly and fast the silat athlete performs the T kick. The silat athlete is expected to be able to kick with maximum power and in a fast time.

Balance

The T kick requires good balance, because the silat athlete must be able to stand on one leg and kick with the other leg. This test measures the silat athlete's ability to remain stable when kicking.

Technique and Formation

In this test, attention is focused on the correct kicking technique, including the position of the feet, body, and head. The silat athlete must ensure that his kick is performed with the correct formation according to the rules of pencak silat.

Integration with Other Movements

A silat athlete is also tested to perform the T kick in a series of movements or combinations with other pencak silat techniques, such as punches, blocks, or evasive movements. This test ensures that the T kick is used in appropriate situations in combat.

Self-defense

A silat athlete is tested to use the T kick in self-defense situations, such as against attacks from various directions or from a stronger opponent. This test evaluates the athlete's ability to use the T kick effectively in real conditions.

Skills in Using Space

In this test, the athlete will be tested on how well they use space while performing the T kick. The athlete must be able to avoid the opponent's attack while performing an effective T kick.

Each of these tests aims to ensure that the athlete not only master's the T kick technique theoretically, but also practically in various situations in pencak silat.

ISSN 2615-8744

Training Program

The training program developed for this study was based on the principles of the drill method, focusing specifically on enhancing T-kick skills. The program consisted of structured training sessions held twice a week over a six-week period. Each session included a warm-up, followed by a series of drills designed to practice the T-kick technique repetitively. The objectives of the training program were to improve the accuracy, speed, and overall execution of the T-kick, while also fostering greater concentration and confidence among the participants. The training sessions were designed to be engaging and varied, incorporating different drills to maintain participant interest and motivation throughout the program.

Statistical Analysis

The data were analyzed using descriptive and inferential statistics. Descriptive statistics (mean and standard deviation) were used to summarize pre-test and post-test scores. The normality of the data was assessed using the Shapiro–Wilk test, and homogeneity of variance was tested using Levene's test, both with a significance level of 0.05. To evaluate the effectiveness of the drill method, a paired samples t-test was conducted to compare pre-test and post-test results. A p-value of less than 0.05 indicated a statistically significant improvement in T-kick performance following the intervention.

RESULT

The result of this study showed that after using the drill approach, the participants' T-kick abilities significantly improved.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test	12	26.00	37.00	30.9167	3.42340
Post-test	12	29.00	43.00	34.1667	3.92737
Valid N (Listwise)	12				

The experimental group, which included 20 students, had an average pre-test score of 30.92 with a standard deviation of 3.42. The same group's post-test scores improved to an average of 34.17 with a standard deviation 3.93 following six weeks of drill method training.

Table 2. Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Pre_test	.209	12	.154	.914	12	.240
Post_test	.184	12	.200*	.934	12	.424

*. This is the bare minimum of its obvious significance.

The table above shows that the Shapiro-Wilk method's normality test resulted in a significance value of 0.240 for the experimental pre-test group and 0.424 for the experimental post-test group. Since both values are more significant than the alpha (0.05), it can be concluded that the results from both groups follow a normal distribution.

Table 3. Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Pre_test	5.870	1	10	.136
Post_test	2.169	1	10	.172

JSES: Journal of Sport and Exercise Science
ISSN 2615-8744

Based on the table above, the p-value obtained in the experimental pretest group is 136, the experimental posttest group is 172. Because the p-value is greater than α = 5% or 0.05, it is known that the pretest and posttest values have the same variance (homogeneous).

Table 4. Paired Samples Test

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest - Posttest eksperimen	-3.250	2.1794	.6291	-4.635	-1.865	-5.166	11	.000

It is evident from the above table that the p-value for the entire experiment is zero thousand. Compared to alpha, the experimental group's nilai is more minor (0,000 < 0,05), indicating that H0 is rejected and H1 is rejected. This indicates a significant difference between the pretest and posttest results, indicating that the T pencak silat's skill has increased using the drill method in the Ta'Miriyah Surabaya High School extracurriculars.

DISCUSSION

Pencak Silat is a traditional martial art of Indonesia that has been passed down through generations and is deeply rooted in the community. Essentially, Pencak Silat is a blend of intellect, spirituality, and the physicality of human beings, forming four aspects: spiritual, artistic, self-defense, and sports. Pencak Silat competitions can be categorized into four types: match category, individual category, pair category, and team category. The T-kick is a technique that involves using one leg and foot, with a straight trajectory forward, striking with the heel, sole, and outer side of the foot, typically used for side attacks targeting various parts of the body (Susanto et al., 2020). Therefore, the researcher tried to improve the ability of PSHT Kandangan Branch students, Kediri branch, in the T kick technique by using the drill method. Classroom action research (PTK) is the methodology used in this study. This study uses the drill method to improve the T-kick skills of athletes at the Bina Satria Muda Kediri martial arts college (Kusnadi & Hartadji, 2015).

To strengthen the interpretation of the findings, the significant improvement in T-kick skills observed in this study is consistent with motor learning theory, which emphasizes the role of repetitive and structured practice in enhancing skill automation and movement efficiency. According to Schmidt (2011), repeated practice allows learners to develop more stable motor programs, leading to improved coordination and accuracy in complex movements. This aligns with the drill method applied in this study, where continuous repetition contributed to better execution of the T-kick technique. Furthermore, the findings are supported by research in sports training indicating that high-frequency technical drills can significantly improve sport-specific skills. Gallahue and Ozmun (2006) highlight that structured motor skill training enhances neuromuscular adaptation, particularly in adolescent learners. This explains the observed increase in both speed and accuracy among participants after six weeks of training.

In addition, Issurin (2008) states that focused and repetitive training on specific techniques within a short period can produce significant performance gains, especially in skill-dominant sports such as martial arts. The drill-based approach used in this study reflects this principle, as it isolates and intensively trains the T-kick movement pattern. From a pedagogical perspective, the results also

support the concept proposed by Mosston and Ashworth (2008), particularly the practice style, where learners actively engage in repeated execution of tasks under guided supervision. This teaching approach is effective in improving technical mastery in physical education settings, including pencak silat training. Moreover, Bompa and Haff (2009) suggest that consistent and progressive training loads contribute to performance improvement by enhancing muscular coordination and movement precision. This is evident in the gradual increase in post-test scores in this study. The drill method used in this research reflects deliberate practice characteristics, as it targets specific

Previous research has shown that various martial arts training techniques are effective, but few have addressed issues with the T kick technique. For instance, research by (Farida & Hariyanto, 2022) demonstrated that the drill method can enhance students' kinesthetic intelligence in sports contexts, but did not focus on its impact on the T-kick technique in Pencak Silat. Additionally, (Pratiwi, 2022) emphasized the importance of structured training methods but lacked empirical evidence regarding the effectiveness of the drill method in improving specific skills like the T-kick. This gap in the literature underscores the need for targeted interventions that can yield measurable improvements in specific techniques, thereby enhancing overall performance in martial arts competitions.

After collecting data from the pre-test and post-test, the researcher conducted a series of analyses to understand the study's results in depth. The analysis included descriptive analysis to summarize the data, a normality test to ensure data distribution, a homogeneity test to assess the similarity of variance between groups, and a comparison test (t-test) to evaluate the significance of the difference between the pre-test and post-test. Based on the data analysis results, the average pre-test score in the experimental group was 30.9167. In contrast, after the intervention, the average post-test score increased to 34.1667. This increase was also followed by a change in the standard deviation, which was 3.42340 before the test and 3.92737 after the test. In addition, the normality test conducted using the Shapiro-Wilk method showed that the significance value for the post-test was 0.424, while for the pre-test, it was 0.240. Since both values are more significant than the significance level ($\alpha = 0.05$), it can be concluded that the data from both groups are normally distributed, so further analysis can be done using parametric statistical tests.

CONCLUSION

The results showed that this training technique effectively improves the T kick skills of students at Ta'Miriyah Surabaya High School who participate in Pencak Silat. Systematic and repetitive practice can improve technique execution, confidence, and overall skill. The significantly higher difference in post-test scores compared to pre-test scores indicates this. The findings confirm the importance of focused training interventions in martial arts, especially in honing basic techniques such as the T-kick, which are crucial to competitive performance. In addition, this study enriches the field of motor learning and martial arts training methodology by providing empirical evidence supporting the effectiveness of the training methods. The results suggest that incorporating these methods into training programs can produce measurable improvements in specific skills, thereby increasing the overall effectiveness of martial arts education in schools. Future research should examine the long-term results of this training, consider how these methods can be applied to other methods in Pencak Silat, and incorporate them into the wider physical education curriculum.

ACKNOWLEDGMENT

The author would like to express his gratitude to all those who played a role in this research, including the Dean of the Faculty of Teacher Training and Education, PGRI Adi Buana University Surabaya, the Head of the Physical Education Study Program, the lecturers of the Physical Education Study Program, PGRI Adi Buana University Surabaya, as well as parents and colleagues.

CONFLICT OF INTEREST

The authors found no conflict of interest in this case

REFERENCES

Astuti, Y. (2017). Pengaruh metode drill dan metode bermain terhadap keterampilan bermain bola voli mini (studi eksperimen pada siswa SD Negeri 14 Kampung Jambak Kecamatan Koto Tangah Kota Padang). Al Ibtida: Jurnal Pendidikan Guru MI, 4(1), 1–16.

Bompa, T. O., & Haff, G. G. (2009). Periodization: Theory and methodology of training (5th ed.). Human Kinetics.

Farida, L., & Hariyanto, E. (2022). Upaya Meningkatkan Keterampilan Tendangan T Menggunakan Metode Drill Pada Atlet Pencak Silat. Prosiding Seminar Nasional" Sport Health Seminar with Real Action" Ilmu Kesehatan Masyarakat Universitas Negeri Malang.

Firdaus, F. M., Nurfauzan, P., & Hanaris, R. (2020). Pengaruh Metode Drill Pencak Silat Terhadap Kecerdasan Kinestetik Siswa Sekolah Dasar. JMIE (Journal of Madrasah Ibtidaiyah Education), 4(1), 53–67.

Gallahue, D. L., & Ozmun, J. C. (2006). Understanding motor development: Infants, children, adolescents, adults (6th ed.). McGraw-Hill.

Ismoyo, F. (2014). Pengaruh latihan variasi speed ladder drill terhadap kemampuan dribbling, kelincahan, dan koordinasi siswa SSB angkatan muda tridadi kelompok umur 11-12 tahun. Yogyakarta (ID): Universitas Negeri Yogyakarta.

Issurin, V. B. (2008). Block periodization versus traditional training theory: A review. Journal of Sports Medicine and Physical Fitness, 48(1), 65–75.

Kusnadi, N., & Hartadji, H. (2015). Ilmu Kepelatihan Lanjutan. Tasikmalaya: Universitas Siliwangi.

Mosston, M., & Ashworth, S. (2008). Teaching physical education (1st online ed.). Spectrum Institute for Teaching and Learning.

Perwira, Y. Y. (2022). Pengaruh Latihan Menggunakan Part Method terhadap Keterampilan Gerak Pencak Silat Seni Tunggal Pada Atlet Persinas Asad Kota Surakarta Tahun 2022.

Pratiwi, M. (2022). Model Latihan Tendangan T Pencak Silat Usia 6-12 Tahun di Kabupaten Pringsewu.

Susanto, A., Putranto, D., Hartatadi, H., Luswita, L., Parina, M., Fajri, R., Sitiana, S., Septiara, S., & Amelinda, Y. S. (2020). Pemberdayaan masyarakat melalui pengelolaan sampah dalam mengurangi sampah botol plastik kampung nelayan Kelurahan Tanjung Ketapang. Abdi: Jurnal Pengabdian Dan Pemberdayaan Masyarakat, 2(2), 94–102.

Schmidt, R. A., & Lee, T. D. (2011). Motor control and learning: A behavioral emphasis (5th ed.). Human Kinetics.

Tambak, S. (2016). Metode Drill dalam Pembelajaran Pendidikan Agama Islam. Al-Hikmah: Jurnal Agama Dan Ilmu Pengetahuan, 13(2), 110–127.

Iskandar, M. Atok, dkk. (1992). Pencak Silat. Departemen Pendidikan dan Kebudayaan Direktorat Jendral Pendidikan Tinggi Proyek Pembinaan Tenaga Kependidikan.

Kriswanto, Erwin Setyo. (2015). Pencak Silat. Yogyakarta: Pustaka Baru Press.

Lubis, Johansyah. (2004). Pencak Silat: Panduan Praktis. Jakarta: PTRajaGrafindo Persada.

Lutan, Rusli. (2000). Strategi Belajar Mengajar Penjaskes. Jakarta: Depdiknas.

Ma'mun, Amung & Yudha M. S. (2000) Perkembangan Gerak dan Belajar Gerak. Jakarta: Departemen Pendidikan dan Kebudayaan.

Martopo, Arijal Haris. (2016). Tingkat Keterampilan Dasar Pencak Silat Siswa Peserta Ekstrakurikuler Pencak Silat SMK Muhammadiyah 2 Moyudan. Skripsi, Fakultas Ilmu Keolahragaan UNY.

Mulyana. 2013. Pendidikan Pencak Silat: Membangun Jati Diri dan Karakter Bangsa. Bandung: Remaja Rosdakarya.

Nugroho, Agung. (2001). Pedoman Latihan Pencak Silat. Yogyakarta: Fakultas Ilmu Keolahragaan UNY.

Munas, IPSI. (2007). Peraturan pertandingan pencak silat ikatan pencak silat indonesia hasil keputusan munas ipsi xii – 2007.

ISSN 2615-8744

Nugroho, Agung. (2001). Pedoman Latihan Pencak Silat. Yogyakarta: Fakultas Ilmu Keolahragaan UNY

INFORMATION ABOUT THE AUTHORS

Majesta Wahyu Aisha; majesaisha@gmail.com; Physical Education, Universitas PGRI Adi Buana Surabaya, Surabaya, Indonesia

I Gede Dharma Utamayasa; https://orcid.org/0000-0002-5307-7285; dharmautamayasa@unipasby.ac.id; Physical Education, Universitas PGRI Adi Buana Surabaya, Surabaya, Indonesia

Angga Indra Kusuma; https://orcid.org/0000-0001-7221-6845; anggaindrakusuma@unipasby.ac.id; Physical Education, Universitas PGRI Adi Buana Surabaya, Surabaya, Indonesia

Yanyong Phanpheng; https://orcid.org/0000-0002-9290-2479; yanyong.pha@lru.ac.th; Sports and Exercise Science Program, Department of Applied Science, Faculty of Science and Technology, Loei Rajabhat University, Thailand.

Ronald Dwi Ardian Fufu; https://orcid.org/0000-0002-5002-5367; ronald.fufu@staf.undana.ac.id; Physical Education, Health and Recreation, Nusa Cendana University, Indonesia

CITE THIS ARTICLE AS

Aisha, M. W., Utamayasa, I. G. D., Kusuma, A. I., Phanpheng, Y., & Fufu, R. D. A. (2026). The Relationship Between Passing Accuracy and On-Point Passing Skills Among Amateur Club-Level Volleyball Players. *JSES : Journal of Sport and Exercise Science*, 9(1), 49–56. https://doi.org/10.26740/jses.v9n1.p49-56