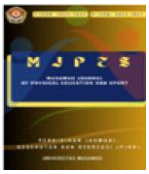
Musamus Journal of Physical Education and Sport (MJPES)
http://ejournal.unmus.ac.id/index.php/physical
Volume 8, No. 2, April 2026 , Pg. 1029-1036
DOI: 10.35724/mjpes.v8i2.8152



Google Drive–Based Assessment of Short-Passing Ability in the SMK YWKA Medan Futsal Club

Iwan Julius Gulo[1], Aidilla Pratiwi Siregar[2]*
[1] Sekolah Tinggi Olahraga dan Kesehatan Bina Guna, Medan, Indonesia
[2] Sekolah Tinggi Olahraga dan Kesehatan Bina Guna, Medan, Indonesia
Corresponding Author: iwanjuliusgulo0604@gmail.com

Abstract
Objectives: This study aims to analyze the short passing ability of futsal extracurricular students at SMK YWKA Medan using a Google Drive based system.
Materials and Methods: This study employed a quantitative descriptive method to objectively assess the short passing accuracy of futsal extracurricular students through video analysis using Google Drive. The population consisted of 15 active futsal extracurricular students at SMK YWKA Medan, while the sample comprised 14 students selected through purposive sampling based on their training participation and involvement in recorded match sessions. The research location was SMK YWKA Medan, where video observations were used to evaluate passing techniques, including foot positioning, ball direction, and timing.
Results: This study examined the short passing ability of 14 futsal extracurricular students at SMK YWKA Medan using Google Drive based video analysis. The results showed that 28.57% of students were in the very good category, 28.57% in the good category, 35.71% in the fair category, and 7.15% in the poor category, indicating that overall passing accuracy was predominantly fair. Video analysis revealed that some students still had difficulties with supporting foot placement, ankle stability during ball contact, and follow through movement, which affected passing direction and power.
Conclusions: The study concluded that the short passing skills of futsal extracurricular students at SMK YWKA Medan were generally in the Fair/Good category, with an average accuracy rate of 65.71%. Specifically, 28.57% of students were classified as Very Good, 28.57% as Good, 35.71% as Fair, and 7.15% as Poor. The use of Google Drive as a digital repository for movement videos, supported by cloud based assessment tools such as Google Forms and Sheets, facilitated objective, efficient, and flexible identification of technical errors, particularly in supporting foot placement, ball contact, and follow through, both during and outside school training sessions.
Keywords: Analysis; Short Passing; Google Drive

Introduction

Physical Education, Sports, and Health (PJOK) is an integral part of the national education system, aiming to develop students' physical fitness, motor skills, reasoning abilities, and character. Through structured physical activities, students are not only encouraged to become physically healthy individuals but also to develop mental resilience and strong discipline. At the Vocational High School (SMK) level, students' interests and talents outside formal classroom hours are accommodated through extracurricular activities, one of which is futsal. Futsal is among the most popular extracurricular sports for vocational high school students because of its dynamic nature, relatively smaller playing area compared to football, and ability to channel the competitive energy of teenagers. As a team sport played at high speed on a limited playing area, futsal requires players to master fundamental techniques effectively.

These techniques include shooting, dribbling, passing, and controlling, all of which must be well integrated during a match. Among these fundamental skills, short passing is a crucial foundation for developing modern futsal playing strategies. Accurate short passing enables a team to maintain ball possession, control the pace of the game, and effectively break through a well organized opponent's defense. However, these ideal conditions are often inconsistent with the actual situation on the field, particularly in the futsal extracurricular program at SMK YWKA Medan. Based on preliminary

Musamus Journal of Physical Education and Sport (MJPES)
http://ejournal.unmus.ac.id/index.php/physical
Volume 8, No. 2, April 2026 , Pg. 1029-1036
DOI: 10.35724/mjpes.v8i2.8152

observations, students frequently experience difficulties in performing short passes, including inaccurate ball direction, poor passing accuracy, and inadequate body coordination when delivering the ball.

The academic characteristics of vocational high school students, who are required to undertake work oriented learning, laboratory practical sessions, and Field Work Practice (PKL) programs, affect the duration and frequency of extracurricular futsal training. Limited face to face training time makes it difficult for coaches to provide detailed and individualized corrections to each student's short passing technique. The evaluation process currently implemented at SMK YWKA Medan remains conventional, with coaches providing verbal instructions and corrections directly on the field during training sessions. This brief evaluation method is less effective because students do not have clear visual records of their movement errors or foot ball contact when performing passes.

Due to the lack of objective evaluation media, students often repeat the same technical mistakes in subsequent training sessions because they do not fully understand the specific errors in their movement mechanics. Therefore, technological innovation is needed to provide an evaluation medium that addresses limited training time and delivers accurate visual feedback. Recent developments in digital technology offer potential solutions through cloud computing platforms, one of which is Google Drive. Google Drive not only functions as a digital data storage platform but can also be optimized as an interactive learning medium that supports remote sports performance analysis through asynchronous learning.

By utilizing Google Drive, coaches can upload video recordings of students performing short passing techniques during training sessions. These videos can then be accessed, reviewed, and analyzed by students anytime and anywhere outside school hours. This approach supports the needs of vocational high school students who require flexible learning and training schedules amid their practical academic activities. Google Drive based analysis also facilitates two way interaction through comment features and digital evaluation sheets using Google Sheets or Google Docs within shared folders. Students can visually identify technical inaccuracies, such as excessive distance between the supporting foot and the ball or improper contact with the inside of the foot when performing short passes

The implementation of video based analysis through Google Drive is expected to improve students' kinesthetic awareness of their own movement abilities. By repeatedly reviewing recordings of their performances, students can conduct self evaluations before applying the necessary corrections during subsequent training sessions. Research on the analysis of sports technical skills using digital storage media at the vocational high school level remains limited in Medan City. Nevertheless, the integration of technology into sports science has considerable potential to accelerate the understanding of fundamental techniques and tactics among athletes and extracurricular students.

Materials and Methods

Study Design

This study employed a descriptive quantitative method to objectively measure and describe the short passing accuracy of futsal extracurricular students at SMK YWKA Medan using video analysis integrated with Google Drive. The study focused on assessing technical performance without testing hypotheses or examining relationships between variables. Short passing is a fundamental skill in modern futsal that influences ball possession and attacking effectiveness. Video based observation enables repeated and systematic analysis of technical aspects, including foot positioning, ball direction, and timing, providing an objective approach to evaluating players' passing performance.

Study Participants

Musamus Journal of Physical Education and Sport (MJPES)
http://ejournal.unmus.ac.id/index.php/physical
Volume 8, No. 2, April 2026 , Pg. 1029-1036
DOI: 10.35724/mjpes.v8i2.8152

The population for this study consists of all students actively participating in the futsal extracurricular activity at SMK YWKA Medan, totaling 15 students. From this population, a sample of 14 students was selected using purposive sampling a method in which subjects are chosen based on specific criteria, such as their level of participation in training sessions and their involvement in the recorded game sessions.

Study Organization

The instruments used in this study consist of two main components: a physical test specifically a futsal short passing ability test and a cloud based digital instrument that leverages the Google Drive ecosystem (Google Forms and Google Sheets) to digitize the recording of scores.

Statistical Analysis

The collected data, organized using Google Sheets, were analyzed through descriptive statistics with percentages to present the research findings. Data collection was conducted under controlled conditions during futsal training or match simulations to ensure equal opportunities for players to perform short passing. Video recordings were stored and managed through Google Drive to facilitate data organization, accessibility, and secure storage. In addition, documentation, including training activity records, player attendance lists, and other relevant supporting information, was used to complement the observation and video analysis. These techniques were expected to produce accurate, objective, and reliable data to describe the short passing accuracy of school futsal players.

Results

This study aims to describe the short passing ability profile of students participating in the futsal extracurricular program at SMK YWKA Medan, utilizing Google Drive as a supporting platform. Data were collected from a sample of 14 students using a short passing accuracy test (at a distance of 5 meters) and an observation sheet assessing the quality of movement mechanics (preparation, execution, and follow through) based on video recordings uploaded to Google Drive. Quantitative data were processed automatically via Google Forms, which are linked to Google Sheets. The research subjects consisted of 14 male students who are active participants in the futsal extracurricular program at SMK YWKA Medan. All participants completed the short passing test, were recorded on video, and accessed a Google Drive repository to review visual evaluations asynchronously.

The results of the short passing accuracy test based on data (10 passing attempts per student) recorded via the digital Google Sheets instrument are presented in the following score distribution:

Table 1 Short Passing Accuracy Test Results

No	Sample Name	Frequency Successful Passes	Accuracy Percentage (%)	Category
1	Ridho	8	80%	Very Good
2	Rizki	7	70%	Good
3	Ikbal	6	60%	Fair
4	Rafa	8	80%	Very Good
5	Mirwa	5	50%	Fair
6	Pandu	7	70%	Good
7	Surya	4	40%	Poor
8	Juliaman	8	80%	Very Good
9	Abil	7	70%	Good
10	Riski	6	60%	Fair
11	Rizky	8	80%	Very Good
12	Prayoga	7	70%	Good

Musamus Journal of Physical Education and Sport (MJPES)
http://ejournal.unmus.ac.id/index.php/physical
Volume 8, No. 2, April 2026 , Pg. 1029-1036
DOI: 10.35724/mjpes.v8i2.8152

13	Sandi	5	50%	Fair
14	Akbar	6	60%	Fair

Based on the data distribution above, among the 14 students who took the short passing accuracy test, 4 students (28.57%) fell into the very good category, 4 students (28.57%) were in the good category, 5 students (35.71%) were in the fair category, and the remaining 1 student (7.15%) was in the poor category. It can be concluded that, overall, the short passing accuracy of the students participating in the futsal extracurricular program at SMK YWKA Medan falls into the fair category, represented by 5 students (35.71%).

The percentage of results from the short passing accuracy test for students in the futsal extracurricular program at SMK YWKA Medan can be seen in the following graph:

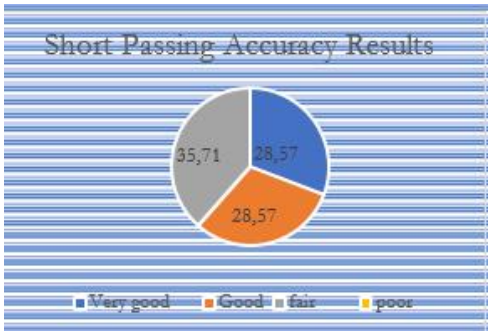


Figure 1. Graph of Short Passing Accuracy Test Results

Analysis of Movement Mechanics via Google Drive: Through an analysis of slow motion video footage uploaded to a shared Google Drive folder, researchers and coaches identified several technical observations regarding the students' movement mechanics:

• Preparation Phase: 64% of students correctly placed their non kicking (support) foot beside the ball (approximately 15 cm away). However, 36% of students positioned their support foot too far from the ball, which compromised their balance.

• Execution Phase: 71% of students successfully made contact with the ball using the middle of the inner foot. The primary error observed was a lack of ankle stability at the moment of impact, which caused the ball to veer off course.

• Follow through Phase: 57% of students stopped their leg swing immediately after making contact with the ball, resulting in a weaker strike and reduced ball speed.

Discussion

The results of the data analysis indicate that the short passing accuracy profile of students participating in the futsal extracurricular program at SMK YWKA Medan reached an average percentage of 65.71%, which falls within the Fair to Good category. This finding objectively illustrates that although most students have mastered the basic concept of short distance passing (5 meters), significant variations in skill levels remain within the team. The presence of students in the Fair (35.71%) and Poor (7.15%) categories highlights the importance of implementing more individualized and measurable evaluation methods to address existing movement mechanics deficiencies.

A more detailed analysis of movement mechanics through video recordings revealed that the students' most common errors occurred during the follow through phase and ankle locking at the moment of impact. Many students tended to stop their kicking motion abruptly immediately after making contact with the ball. In sports physiology and biomechanics, proper follow through plays a crucial role in transferring momentum from the body to the ball and maintaining a stable, low ball trajectory. Inadequate execution of this follow through phase directly reduces passing accuracy and results in insufficient ball speed, making it easier for opponents to intercept the ball during actual match situations.

Furthermore, the supporting foot position is another critical factor influencing students' passing performance. Based on slow motion video recordings, students with lower

accuracy generally positioned their supporting foot too far behind or too far to the side of the ball. This condition results in an improper kicking range, misalignment of the hips with the target, and a backward shift in the body's center of gravity. Consequently, ball contact does not occur precisely at the center of the ball, causing the ball to rise or deviate from the intended target direction.

The integration of Google Drive as a video evaluation repository platform has proven to be an effective solution to the limited physical training time available to vocational high school students. Students at Vocational High Schools (SMK) generally have demanding academic and vocational practical workloads, leaving limited time for extracurricular field training. The use of cloud storage enables asynchronous technical evaluation, allowing coaches to provide corrective feedback through students' individual folders while enabling students to review their movement recordings anytime and anywhere without disrupting school practical sessions or reducing their physical training time on the field.

Theoretically, the use of video recordings through Google Drive facilitates a video assisted learning process that strengthens students' kinesthetic awareness and mental imagery. When students directly observe visual representations of their own body movements in slow motion, they can compare their perceived motor responses during training with the actual movements captured on camera. This visual discrepancy encourages self evaluation and independent correction. Students no longer rely solely on verbal instructions from coaches, which are often abstract, but instead develop a concrete understanding of the specific movement components that need improvement in subsequent training sessions.

The findings of this study confirm that the application of digital technology based movement analysis (sports science), such as Google Drive, can improve the efficiency of sports coaching in school environments. Combining quantitative measurements of on field passing accuracy with qualitative movement mechanics analysis through cloud based storage creates a transparent, measurable, and well documented training system. This integrated evaluation method is not only useful for assessing students' current short passing abilities but also provides an important foundation for coaches to design more targeted repetition drills that address each student's specific technical deficiencies in future training sessions.

Conclusions

The study concluded that the short passing skills of futsal extracurricular students at SMK YWKA Medan were generally in the Fair/Good category, with an average accuracy rate of 65.71%. Specifically, 28.57% of students were classified as Very Good, 28.57% as Good, 35.71% as Fair, and 7.15% as Poor. The use of Google Drive as a digital repository for movement videos, supported by cloud based assessment tools such as Google Forms and Sheets, facilitated objective, efficient, and flexible identification of technical errors, particularly in supporting foot placement, ball contact, and follow through, both during and outside school training sessions.

Acknowledgments

The author expresses gratitude to SMK YWKA Medan and the Bina Guna College of Sports and Health, as well as to the researchers and authors who participated in and provided support for this research project.

Conflict of Interest

The authors declare no conflict of interest.

Funding

This research received no external funding.

References

Arikunto, S. (2013). Prosedur penelitian: Suatu pendekatan praktik. Rineka Cipta. Arikunto, S. (2020). Manajemen penelitian. Rineka Cipta.

Arwandi, J., & Junifer, A. (2020). Kontribusi kelincahan dan koordinasi mata kaki terhadap kemampuan passing pendek pemain futsal. Jurnal Kepelatihan Olahraga, 12(1), 34–42.

Bompa, T. O., & Buzzichelli, C. (2019). Periodization: Theory and methodology of training (6th ed.). Human Kinetics.

Budiman, A., & Supriatna, E. (2019). Pengaruh pembelajaran berbasis video feedback terhadap peningkatan keterampilan gerak dasar olahraga. Jurnal Pendidikan Jasmani dan Olahraga, 4(2), 176–183.

Chaeruman, U. A. (2021). Desain sistem pembelajaran blended learning. Rajawali Pers.

Chelladurai, P., & Kerwin, S. (2017). Human resource management in sport and recreation (3rd ed.). Sport Management Review, 20(2), 135–146.

Darmawan, D. (2021). Teknologi pembelajaran vokasi. Remaja Rosdakarya. Daryanto. (2021). Media pembelajaran inovatif. Gava Media.

Fathoni, M. I., & Kristiyandaru, M. (2022). Penerapan media berbasis video pembelajaran dalam menganalisis teknik dasar permainan futsal siswa sekolah menengah. Jurnal Pendidikan Olahraga dan Kesehatan, 10(1), 201–208.

Faturohman, M. N., Permadi, A. A., & Hermawan, I. (2024). Analisis teknik dasar futsal berbasis digital. Journal of Sport, 8(1), 45–52.

Gunawan, I., & Hermawan, D. (2024). Penggunaan teknologi smartphone dan aplikasi penyimpanan awan untuk evaluasi mandiri (self assessment) dalam kegiatan ekstrakurikuler olahraga. Jurnal Inovasi Pembelajaran Olahraga, 6(2), 112–121.

Hidayat, N., & Ramadhan, A. (2021). Pemanfaatan Google Drive sebagai media penyimpanan dan distribusi tugas video pembelajaran praktik siswa SMK. Jurnal Teknologi Pendidikan dan Pembelajaran, 8(2), 104–112.

Hoye, R., Smith, A., Nicholson, M., Stewart, B., & Westerbeek, H. (2018). Sport management: Principles and applications (4th ed.). Routledge.

Irianto, D. P. (2022). Metodologi pelatihan keterampilan olahraga. UNY Press.

Irawan, D., & Setijono, H. (2018). Evaluasi program pembinaan ekstrakurikuler futsal di tingkat sekolah menengah kejuruan. Jurnal Prestasi Olahraga, 3(2), 115–123.

Kustandi, C., & Rivai, A. (2020). Media pembelajaran manual dan digital. Ghalia Indonesia.

Lesmana, A., & Hartono, S. (2021). Pembelajaran taktis futsal berbasis visual pada siswa sekolah menengah. Jurnal Pendidikan Jasmani Indonesia, 17(1), 55–64.

Lesmana, A., & Wibowo, S. (2022). Pengaruh partisipasi ekstrakurikuler olahraga terhadap kecerdasan emosional dan kerja sama tim siswa SMK. Jurnal Sport Area, 7(2), 180–191.

Lutan, R., & Suherman, A. (2021). Kurikulum dan pembelajaran penjas. Alfabeta. Luxbacher, J. A. (2011). Soccer: Steps to success (4th ed.). Human Kinetics.

Mahendra, A., & Purnomo, E. (2021). Pengembangan instrumen tes keterampilan short passing futsal berbasis ketepatan sasaran. Jurnal Olahraga Indonusa, 9(2), 89–97.

Mardiana, S., & Lestari, W. (2020). Efektivitas kolaborasi asinkronus menggunakan fitur komentar Google Docs dan Drive dalam evaluasi tugas mandiri. Jurnal Pendidikan Digital, 5(1), 22–31.

Nugraha, U., & Yuliawan, D. (2018). Analisis biomekanika dan koreksi visual menggunakan rekaman video pada keterampilan motorik siswa. Jurnal Sains Olahraga dan Pendidikan Jasmani, 17(2), 43–51.

Nugroho, A., & Hidayat, T. (2020). Analisis keterampilan teknik dasar futsal siswa sekolah menengah. Jurnal Pendidikan Jasmani Indonesia, 16(2), 85–94.

Nurhasan., & Kurniawan, F. (2023). Pengaruh sarana media digital terhadap motivasi siswa dalam kegiatan ekstrakurikuler. Jurnal Pendidikan Jasmani dan Olahraga, 8(1), 77–86.

Nursalam., Fitriani., & Hasim. (2022). Fleksibilitas akses materi olahraga berbasis cloud storage pada siswa SMK. Jurnal Pendidikan Olahraga dan Kesehatan, 10(2), 115–124.

Pasha, A. R., dkk. (2025). Pengaruh latihan variasi passing kombinasi terhadap kemampuan passing futsal SMAN 4 Mandau. Jurnal Kepelatihan Olahraga, 17(1), 12–23.

Pradipta, G. D., & Sukoco, P. (2021). Pemanfaatan media pembelajaran audiovisual berbasis Android untuk meningkatkan pemahaman taktik dan teknik atlet futsal pelajar. Jurnal Keolahragaan, 9(2), 241–251.

Pratama, R. A., & Nugroho, S. (2019). Tingkat keterampilan teknik dasar bermain futsal peserta ekstrakurikuler tingkat sekolah menengah. Jurnal Keolahragaan, 7(1), 45–53.

Pratama, R., Yulia, N., & Wibowo, S. (2022). Pengaruh penggunaan video tutorial via Google Drive terhadap ketepatan operan futsal. Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 8(2), 145–158.

Rusnandi., & Sudira, P. (2021). Karakteristik dan profil kesiapan kerja siswa sekolah menengah kejuruan. Jurnal Pendidikan Vokasi, 11(1), 33–44.

Safitria, K., & Nasution, I. P. (2023). Analisis penggunaan aplikasi Google Drive sebagai media penyimpanan data. Jurnal Teknologi Informasi dan Komunikasi, 7(1), 88–95.

Saputra, M. A., & Wahyuni, T. (2023). Implementasi cloud storage Google Drive untuk efisiensi pengumpulan data unjuk kerja siswa di sekolah menengah kejuruan. Jurnal Informatika Pendidikan, 11(1), 57–66.

Setiawan, A., dkk. (2021). Kendala durasi dan manajemen pengajaran taktik ekstrakurikuler olahraga SMK. Jurnal Keolahragaan, 9(1), 101–110.

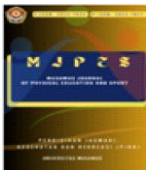
Setyosari, P. (2022). Desain dan konsep pembelajaran digital. Bumi Aksara. Sobur, A. (2020). Psikologi perkembangan: Remaja dan masalahnya. Pustaka Setia.

Sudirman., Kurniawan., & Rahmawati. (2022). Efisiensi pengorganisasian bahan ajar digital melalui repositori Google Drive. Jurnal Teknodik, 26(1), 14–25.

Sugiyono. (2019). Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D. Alfabeta.

Sugiyono. (2021). Metode penelitian evaluasi pendidikan. Alfabeta.

Sugiyono. (2022). Metode penelitian kuantitatif, kualitatif, dan R&D (edisi revisi). Alfabeta.



Sujiono, S., & Kurniawan, F. (2022). Analisis kesalahan gerakan passing pendek sepakbola dan futsal pada usia remaja. Jurnal Kepelatihan Fisik dan Olahraga, 7(3), 162–170.

Sukamto., & Hidayat, R. (2021). Pengaruh kesiapan konseptual visual terhadap performa teknik dasar futsal. Jurnal Keolahragaan, 9(1), 88–97.

Sukardi., & Wardani, K. (2022). Dominasi gaya belajar kinestetik dan visual spasial siswa kejuruan. Jurnal Pendidikan Vokasi, 12(2), 150–161.

Sukmadinata, N. S. (2016). Metode penelitian pendidikan. PT Remaja Rosdakarya.

Tauba, R. F., & Bafirman, H. B. (2021). Pengembangan instrumen tes dribbling pada permainan futsal menggunakan teknologi mikrokontroler Arduino. Jurnal Performa Olahraga, 6(2), 110–118.

Usman, H. (2021). Manajemen dan pengelolaan ekstrakurikuler sekolah. PT Remaja Rosdakarya.

Wicaksono, A., & Prasetyo, E. (2023). Pemanfaatan Google Drive dalam pembelajaran PJOK untuk efisiensi durasi latihan fisik. Jurnal Ilmu Keolahragaan, 22(1), 40–51.