Empiricism Journal
https://journal-center.litpam.com/index.php/empiricism
email: empiric.journal@gmail.com

Vol. 7, No 2, June 2026
e-ISSN: 2745-7613
pp. 1482-1488

Efforts to Improve Learning Outcomes of Balance Movements Through Activity-Based Learning in 3rd Grade Students at State Elementary School 1 Landasan Ulin Selatan

Kamaruddin*, Lazuardy Akbar Fauzan, Suadmaji
Program Studi Pendidikan Profesi Guru, Fakultas Keguruan dan Ilmu Pendidikan,
Universitas Lambung Mangkurat, Banjarbaru, Indonesia 70714.
Email Correspondence: peserta.46085@ppg.belajar.id

Abstract

The low balance movement learning outcomes of Grade 3 students at SDN 1 Landasan Ulin Selatan served as the primary urgency of this study, where pre-cycle mastery reached only 39.1% meaning only 9 of 23 students met the individual mastery criterion (score ≥ 75) far below the 80% classical success indicator set for this classroom action research. This study aimed to improve static and dynamic balance movement learning outcomes through the implementation of Activity-Based Learning (ABL). This research employed a Classroom Action Research (CAR) design conducted in two cycles. The research subjects were 23 Grade 3 students at SDN 1 Landasan Ulin Selatan for the 2025/2026 academic year. Data were collected through structured observation using teacher and student activity observation sheets (content-validated by a supervising lecturer) and performance tests using static and dynamic balance assessment rubrics; two raters achieved 92% agreement prior to implementation. Data analysis used comparative descriptive techniques by comparing mastery percentages across cycles. The results demonstrated significant improvement: class average increased from 66.6 (pre-cycle) to 76.0 (Cycle I) and 82.2 (Cycle II). Mastery percentage rose from 39.1% to 60.9% in Cycle I and 91.3% in Cycle II, exceeding the 80% success indicator. Teacher activity improved from 73.9% (Sufficient) to 94.6% (Very Good). It is concluded that the implementation of Activity-Based Learning improved students' balance movement learning outcomes in this classroom action research context.

Keywords: *Balance Movement; Activity-Based Learning; Classroom Action Research.*

How to Cite: Kamaruddin, K., Fauzan , L. A., & Suadmaji, S. (2026). Efforts to Improve Learning Outcomes of Balance Movements Through Activity-Based Learning in 3rd Grade Students at State Elementary School 1 Landasan Ulin Selatan. *Empiricism Journal*, *7*(2), 1482-1488. https://doi.org/10.36312/ej.v7i2.5342

https://doi.org/10.36312/ej.v7i2.5342

INTRODUCTION

Physical Education, Sports, and Health (PJOK) is an integral part of the national education system that aims to develop the physical, cognitive, affective, and psychomotor aspects of students comprehensively (Mashud, 2019). In the Merdeka Curriculum, PJOK at the Elementary School Phase B level (Grades 3–4) is directed to enable students to refine fundamental movement skills, apply them in new movement situations, and demonstrate various movement concepts that are relevant in sequences of activities (Kemendikbudristek, 2022). One of the fundamental and important movement competencies that must be mastered from an early age is balance movement ability.

Balance movement is the ability to maintain the body's center of gravity over its base of support, both in a stationary condition (static) and while moving (dynamic). This ability plays a crucial role as a foundation for various advanced movement skills such as running, jumping, gymnastics, and sports games. For students aged 8–9 years, who are in a period of rapid motor development, proper and systematic balance stimulation is very necessary to optimize their movement potential (Gebel et al., 2018; Kiranida, 2019).

Based on initial observations in grade 3 at SDN 1 Landasan Ulin Selatan in April 2026, it was found that most students experienced difficulties in performing static and dynamic balance movements. Out of 23 students, only 9 (39.1%) achieved the mastery score, far below the set KKTP of 80%. This condition was caused by several factors, including: the learning method is still conventional with teacher-dominated demonstrations without sufficient space for students to practice actively; the lack of variation in enjoyable movement activities resulting in low learning motivation; and students did not have enough opportunities to explore balance movements contextually. Similar problems were found by (Dwi Pangga, 2023) in his research

in grade III at SDN 223 Gresik, where the mastery of PJOK learning outcomes in the pre-cycle was very low before the implementation of an innovative learning model.

Various studies have proven that a learning approach that places physical activity at the core of the learning process can significantly increase student engagement, motivation, and learning outcomes. (Puspitorini, W., & Tangkudung, 2023) developing a learning model based on physical activity for elementary school students that has been proven effective in improving motor skills and learning engagement. (Caracuel-cáliz et al., 2025) in a systematic review of 22 studies concluded that active methodologies that integrate physical activity have a positive impact on academic achievement, physical health, and social-emotional development of elementary school students. Meanwhile, (Hilmi, et al., 2025) found that modifications of traditional games significantly enhance physical literacy of elementary school students.

Although previous studies have examined physical activity learning models and active methodologies in general elementary school contexts, a research gap remains: few studies specifically target static and dynamic balance movement outcomes among third-grade students using a structured three-phase intervention (understanding, applying, reflecting) within a classroom action research framework. Moreover, the integration of cooperative learning roles and a gamified element such as a “Mini Balance Olympics” into ABL has not been examined in this specific population and setting. This study, therefore, contributes novelty by (1) focusing specifically on static and dynamic balance movement rather than general motor skills; (2) applying ABL through three clearly defined phases; and (3) incorporating cooperative learning structures and differentiated activities within a classroom action research design at SDN 1 Landasan Ulin Selatan. Activity-Based Learning (ABL) is a pedagogical approach that places structured and meaningful physical activities as the main vehicle for the learning process. In the context of Physical Education, Sports, and Health (PJOK), ABL emphasizes the direct involvement of students through movement exploration, paired exercises, educational games, and reflection aligned with the characteristics of 8–9-year-old students who naturally enjoy moving and learning through direct physical experience (Muehlbauer, 2021). Based on the actual conditions in the classroom and the literature review, this study aims to: (1) describe the implementation of ABL in balance movement learning in the third-grade class of SDN 1 Landasan Ulin Selatan, and (2) improve learning outcomes in static and dynamic balance movements through the application of ABL.

METHOD

This research is a Classroom Action Research (CAR) that is collaborative and participatory in nature, using the Kemmis and McTaggart model which consists of four components in each cycle: (1) planning, (2) action implementation, (3) observation, and (4) reflection (Arikunto, 2021). The research was conducted at SDN 1 Landasan Ulin Selatan, Liang Anggang District, Banjarbaru City, South Kalimantan Province, in the Even Semester of the 2025/2026 Academic Year (April–May 2026) in two cycles, with each cycle consisting of two meetings.

The research subjects were all third-grade students of SDN 1 Landasan Ulin Selatan, totaling 23 people (13 boys and 10 girls). The selection of this class was based on the results of preliminary observations that showed low learning outcomes in balance movements.

The research procedure in each cycle includes: (a) Planning: preparing the Learning Module/Lesson Plan based on ABL, preparing media (motion videos, balance benches, 5 m straight line, balance board), preparing instruments, and coordinating with the mentor teacher. In Cycle II, planning was refined based on reflections from Cycle I by adding activity variations, strengthening cooperative learning, and designing differentiated learning; (b) Implementation: learning with three phases of ABL Understanding (video observation and discussion of the benefits of balance), Applying (one-legged standing exercises, airplane pose, walking on a straight line, walking on a balance beam), and Reflecting (students share their learning experiences). In Cycle II, dynamic movement variations were added (walking while carrying an object on the head, walking backward) and a 'Mini Balance Olympics'; (c) Observation: conducted by the mentor teacher using a structured observation sheet; (d) Reflection: data analysis to formulate improvements for the next cycle.

Data collection techniques used: (1) Observation, using observation sheets for teacher activities (23 indicators, maximum score 92) and students (17 indicators, maximum score 68),

which have been content-validated by two validators (the supervising lecturer and a PJOK subject specialist) using a structured validation form assessing relevance, clarity, and completeness of indicators; both validators rated all items as “valid,” with no items requiring revision; (2) Performance Test, using a rubric for static balance assessment (5 aspects: body stability, posture control, duration of balance, movement coordination, and successful task completion; maximum score 20) and dynamic balance assessment (5 aspects: body stability while moving, postural adjustment, movement coordination, stride consistency, and successful task completion; maximum score 20) with a scale of 1– 4; two raters (the classroom teacher and the supervising lecturer) discussed and agreed on the rubric criteria before implementation and achieved a percentage agreement of 92% during a calibration assessment session; and (3) Documentation in the form of activity photos and score lists.

The data analysis technique uses comparative descriptive by comparing class averages and the mastery percentages between cycles (Sugiyono, 2022). The mastery percentage is calculated using the formula: Mastery Percentage = (Number of Students Who Master ÷ Total Number of Students) × 100%. The research success indicator is determined if at least 80% of students achieve the Minimum Completion Criteria (score ≥ 75) and learning activities are in the "Good" or "Very Good" category.

RESULTS AND DISCUSSION

Pre-Cycle

Before the research was conducted, initial observations indicated that the PJOK learning process still used a conventional approach teacher demonstrations followed by individual practice without sufficient variation in activities. Students appeared less enthusiastic, some were reluctant to try movements considered difficult, and there was no structured mechanism for mutual support among students. The pre-cycle performance data are presented in Table 1 below.

Table 1. Learning Outcomes of Balance Movement Pre-Cycle

Description	Result
Student Completed	9 (39,1%)
Student Not Completed	14 (60,9%)
Average	66,6

Based on the table above, the class average score in the pre-cycle was 66.6, with the number of students reaching the Minimum Completeness Criteria (score ≥ 75) being only 9 students (39.1%), while 14 students (60.9%) had not yet achieved completeness. This figure is far below the research success indicator set at 80%. This data serves as the main basis for conducting classroom action research through the implementation of Activity-Based Learning (ABL).

Cycle I

Table 2. Results of Teacher Activity Observation Cycle I

Aspect/Phase	Score	Maximum	Percentage	Category
Initial Activities (5 indicators)	15	20	75,0%	Sufficient
Understanding Phase (4 indicators)	11	16	68,8%	Sufficient
Applying Phase (8 indicators)	22	32	68,8%	Sufficient
Reflecting Phase (3 indicators)	9	12	75,0%	Sufficient
Closing Activities (3 indicators)	11	12	91,7%	Very Good
Total	68	92	73,9%	Sufficient

Based on Table 2, the results of observing teacher activity in Cycle I obtained an overall percentage of 73.9% with a Sufficient category. The highest percentage was in the closing activity at 91.7% with a Very Good category, while the phases of understanding and applying each obtained 68.8% with a Sufficient category. These results indicate that the teacher has conducted the learning quite well, but still needs to improve lesson management in the stages of material delivery and practice.

Table 3. Observation Results of Student Activities Cycle I

Aspects/Phases	Score	Maximum	Percentage	Category
Initial Activities (4 indicators)	11	16	68,8%	Sufficient
Understanding Phase (4 indicators)	10	16	62,5%	Poor
Applying Phase (6 indicators)	15	24	62,5%	Poor
Reflecting & Closing Phase (3 indicators)	9	12	75,0%	Sufficient
Total	45	68	66,2%	Sufficient

Based on Table 3, the results of observing student activities in Cycle I obtained an overall percentage of 66.2% with a Sufficient category. The initial activity obtained a percentage of 68.8% with a Sufficient category, while the understanding and applying phases each obtained 62.5% with a Poor category. In the reflecting and closing phases, students obtained a percentage of 75.0% with a Sufficient category.

Table 4. Learning Outcomes of Balance Movement Cycle I

Description	Result
Student Completed	14 (60.9%)
Student Not Completed	9 (39,1%)
Average	76

Based on the learning outcomes data of students in Cycle I, the class average was 76.0 with a learning completeness percentage of 60.9%. Out of 23 students, 14 students were declared complete, while the other 9 students were still not complete.

Cycle II

Table 5. Results of Teacher Activity Observation Cycle II

Aspect/Phase	Score	Maximum	Percentage	Category
Initial Activities (5 indicators)	20	20	100,0%	Very Good
Understanding Phase (4 indicators)	15	16	93,8%	Very Good
Applying Phase (8 indicators)	29	32	90,6%	Very Good
Reflecting Phase (3 indicators)	11	12	91,7%	Very Good
Closing Activities (3 indicators)	12	12	100,0%	Very Good
Total	87	92	94,6%	Very Good

Based on the results of the teacher's activity observation in Cycle II, an overall percentage of 94.6% was obtained with a Very Good category. The opening and closing activities each obtained a percentage of 100.0%, indicating that the teacher was able to open and close the learning very well. In the understanding phase, a percentage of 93.8% was obtained, the applying phase 90.6%, and the reflecting phase 91.7%, all of which fall into the Very Good category.

Table 6. Observation Results of Student Activities Cycle II

Aspects/Phases	Score	Maximum	Percentage	Category
Initial Activities (4 indicators)	16	16	100%	Very Good
Understanding Phase (4 indicators)	14	16	87,5%	Very Good
Applying Phase (6 indicators)	23	24	95,8%	Very Good
Reflecting & Closing Phase (3 indicators)	11	12	91.7%	Very Good
Total	64	68	94,11%	Very Good

Based on the results of observations of student activities, an overall percentage of 94.11% was obtained with a very good category. In the initial activity, students obtained a percentage of 100% with a very good category. The understanding phase and the application phase each obtained percentages of 87.5% and 95.8% with a very good category, indicating that student involvement in understanding the material and performing movement practices was already optimal. Meanwhile, in the reflection and closing phases, a percentage of 91.7% was obtained with a very good category.

Table 7. Learning Outcomes of Balance Movement Cycle II

Description	Result
Student Completed	21 (91.3%)
Student Not Completed	2 (8.6%)
Average	82.2

Based on the learning outcomes of students in Cycle II, a class average of 82.2 was obtained with a learning completeness percentage of 91.3%. Out of 23 students, 21 students were declared complete, while only 2 (8.6%) students were not yet complete. Beyond the quantitative data, qualitative observations in Cycle II also revealed meaningful changes in student behavior. Students demonstrated increased confidence in attempting balance movements, with fewer refusals to try challenging poses compared to Cycle I. Peer support became more visible as students in the observer and recorder roles offered encouragement and corrective cues to their partners. Several students who had previously avoided one-legged balance poses voluntarily attempted them during the Mini Balance Olympics activity. Students also showed improved ability to follow multi-step movement instructions and to self-correct their posture during practice, suggesting growth in both motor skill and self-regulation. These behavioral changes suggest that ABL created a supportive and motivating learning environment that contributed to the overall improvement in balance movement outcomes.

Discussion

Based on research data, it shows a consistent upward trend. The class average increased from 66.6 (pre-cycle) to 76.0 (Cycle I) and 82.2 (Cycle II). The completeness percentage surged from 39.1% to 60.9% and finally 91.3%, surpassing the success indicator of 80%. This increase consistently demonstrates the positive impact of implementing ABL on balance movement learning outcomes in this classroom action research context.

This improvement in learning outcomes aligns with Bloom's view (in Hoque, 2016) which emphasizes the importance of the psychomotor domain in PE learning. Muehlbauer, (2021) demonstrated that structured and progressive balance training significantly improves static and dynamic balance performance in elementary school children consistent with the findings of this study, where students who received more, structured, and varied practice in Cycle II showed greater improvements in learning outcomes.

Puspitorini, W., & Tangkudung, (2023) It was found that the learning model based on physical activities for elementary school students proved effective in improving students' motor skills and learning engagement. This result aligns with the findings of this study, where the increase in teacher activity from the Sufficient category (73.9%) in Cycle I to Very Good (94.6%) in Cycle II positively correlated with the improvement of student learning outcomes. The improvement in learning outcomes can be explained through several learning mechanisms inherent in ABL. First, ABL significantly increased students' active movement time compared to the conventional approach, providing more practice opportunities for balance skill acquisition. Second, the structured progression from Cycle I to Cycle II with added dynamic movement variations and differentiated activities allowed repeated and varied practice that promoted motor control development. Third, cooperative learning through role assignments (actor, observer, recorder) provided peer feedback and emotional support, building students' confidence to attempt challenging movements. Fourth, the reflection phase at the end of each session helped students identify and correct their own movement errors, promoting metacognitive awareness of balance technique. Fifth, the Mini Balance Olympics in Cycle II increased motivation and engagement, creating a positive and competitive learning atmosphere. Together, these mechanisms explain why ABL was more effective than conventional teacher-demonstration methods in improving balance movement outcomes.

Systematic review Caracuel-cáliz et al., (2025) Based on 22 international studies, it was concluded that active methodologies involving physical activity have a positive impact on academic achievement, physical health, and social-emotional development of elementary school students. This study confirms that conclusion in the context of physical education learning in Indonesia, particularly in balance movement material which directly requires active physical involvement as the main learning medium.

Strengthening the elements of cooperative learning in Cycle II through role assignments (actor, observer, recorder) has been proven to contribute to the improvement of learning

outcomes. Suhartini, (2020) found that the cooperative learning method has a significant effect on students' basic movement learning outcomes, because peer-to-peer interaction builds intrinsic motivation and provides more personal feedback. Students who act as movement observers not only help their friends, but indirectly strengthen their own understanding of correct movement techniques.

The findings of this study are also in line with Dwi Pangga, (2023) who demonstrated that the implementation of an active learning model in third-grade PE at elementary schools increased learning completeness from 57% to 77%. A similar pattern of increase was found in this study (39.1% → 60.9% → 91.3%). Hilmi, et al., (2025) also found that modifications of traditional games that are activity-centric improve primary school students' physical literacy, which includes balance skills. Lorås, (2020) in his meta-analysis concluded that quality physical education with active movement training programs produces more optimal motor development and has important pedagogical implications that PE teachers need to design learning that maximizes students' active movement time. Regarding the two students who did not achieve mastery in Cycle II, their non-completion represents an important limitation of this study. Observations indicated that these students displayed excessive anxiety about injury during dynamic balance tasks, leading to hesitation and avoidance of challenging movements. This finding highlights that while ABL is effective for the majority of students, individual psychological barriers particularly fear of falling or injury require targeted individual support strategies beyond what the group ABL format can provide. This constitutes a limitation of the current classroom action research design and underscores the need for individual mentoring, modified task progressions, and additional practice sessions for students with movement anxiety. Future implementations of ABL should incorporate differentiated support strategies and psychological safety measures to address the needs of such students.

CONCLUSION

The implementation of Activity-Based Learning improved the learning outcomes of static and dynamic balance movements in Grade 3 students at SDN 1 Landasan Ulin Selatan within the context of this classroom action research. The class average consistently increased from 66.6 (pre-cycle) to 76.0 (Cycle I) and 82.2 (Cycle II). The percentage of learning completeness increased from 39.1% to 60.9% in Cycle I and 91.3% in Cycle II, exceeding the established success indicator of 80%. In addition, teacher activity improved from the Sufficient category (73.9%) to Very Good (94.6%), which indicates that teachers are becoming more skilled in managing activity-based learning in a systematic and reflective manner. These findings are specific to one third-grade class at SDN 1 Landasan Ulin Selatan and should be further validated through broader samples or experimental designs before generalization.

RECOMMENDATIONS

PJOK teachers are advised to consistently adopt the three phases of ABL (understanding, applying, reflecting), maximize the allocation of time for active movement practice, and integrate elements of cooperative learning with clearly defined role distribution within the groups. Learning differentiation for students who need more intensive guidance also needs to be implemented. Schools are advised to provide adequate PJOK facilities and equipment, encourage the routine implementation of classroom action research, and facilitate the sharing of best practices among teachers. There are still 2 students who have not completed the program due to special factors such as excessive anxiety about injury, requiring individual mentoring and additional practice outside regular learning hours. Further research with a broader scope and experimental design is recommended to strengthen the generalization of the findings.

ACKNOWLEDGMENT

The author expresses gratitude to the Principal and all members of SDN 1 Landasan Ulin Selatan, the supervisory teachers, field guidance lecturers, and the third-grade students who have actively participated in this research. Thanks are also extended to the Teacher Professional Education Program (PPG) of Lambung Mangkurat University for facilitating the implementation of this classroom action research.

REFERENCES

Arikunto, S., Suhardjono, & S. (2021). *Arikunto, S., Suhardjono, & Penelitian Tindakan Kelas (Edisi Revisi). Jakarta: Bumi Aksara. ISBN: 978-602-217-656-7.* (Suryani (ed.); Edisi Revi). PT Bumi Aksara.

Capaian Pembelajaran Mata Pelajaran PJOK Fase B (2022). https://guru.kemendikdasmen.go.id/kurikulum/referensi-penerapan/capaian-pembelajaran/sd-sma/pendidikan-jasmani-olahraga-dan-kesehatan-pjok/fase-b/

Caracuel-cáliz, R. F., Ubago-jiménez, J. L., Alonso-vargas, J. M., & Melguizo-ibáñez, E. (2025). *Impact of Active Methodologies Involving Physical Activity on Primary School Students : A Systematic Review (2018 – 2024)*. 1–20.

Dwi Pangga, B. F. T. K. (2023). Meningkatkan Hasil Belajar PJOK melalui Model Pembelajaran. *Jumper: Jurnal Mahasiswa Pendidikan Olahraga*, *4*(1), 122–134.

Gebel, A., Lesinski, M., & Behm, D. G. (2018). Effects and Dose – Response Relationship of Balance Training on Balance Performance in Youth : A Systematic Review and Meta-Analysis. *Sports Medicine*. https://doi.org/10.1007/s40279-018-0926-0

Hoque, M. E. (2016). *Three Domains of Learning : Cognitive , Affective and Psychomotor*. *2*(2), 45–52.

Kiranida, O. (2019). Memaksimalkan perkembangan motorik siswa sekolah dasar melalui pelajaran penjaskes. *Tunas bangsa*, *6*(2).

Lorås, H. (2020). The Effects of Physical Education on Motor Competence in Children and Adolescents : A Systematic Review and Meta-Analysis. *Sports*, *8*. https://doi.org/10.3390/sports8060088

Mashud, M. (2019). Analisis Masalah Guru Pjok Dalam Mewujudkan Tujuan Kebugaran Jasmani. *Multilateral Jurnal Pendidikan Jasmani Dan Olahraga*, *17*(2), 77–85. https://doi.org/10.20527/multilateral.v17i2.5704

Muehlbauer, T. (2021). Effects of balance training on static and dynamic balance performance in healthy children : role of training duration and volume. *BMC Research Notes*, 10–14. https://doi.org/10.1186/s13104-021-05873-5

Puspitorini, W., & Tangkudung, J. (2023). Physical Activity Learning Model for Students in Elementary School. *Halaman Olahraga Nusantara*, *6*(1), 157–166. https://doi.org/https://doi.org/10.31851/hon.v6i1.10186

Sabya Lasylki Hilmi, Ervan Kastrena, E. F. A. (2025). Pengaruh Modifikasi Permainan Tradisional terhadap. *Jumper: Jurnal Mahasiswa Pendidikan Olahraga*, *6*(2), 428–438.

Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Alfabeta.

Suhartini, M. (2020). Pengaruh Metode Cooperative Learning Dan Persepsi Kinestetik Terhadap Hasil Belajar Gerak Dasar Manipulatif. *VISIPENA Учредители: STKIP Bina Bangsa Getsempena*, *11*(1), 99–115.