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Efforts to Improve Basic Locomotor Running Skills through Adaptive Practice Style in Students with Intellectual Disabilities in Inclusive Elementary Schools

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ABSTRACT: Students with intellectual disabilities often struggle with fundamental locomotor skills such as running because of limited coordination, balance, and understanding of instructions. This classroom action research aimed to improve the running skill of a second-grade student with mild intellectual disability at SD Negeri 002 Batu Ampar through an Adaptive Practice Style approach. The study followed the Kemmis and McTaggart model across two cycles of two meetings each (April– May 2026). The subject was one student (MI). Data were collected through observation with a five-indicator rubric (scale 1–4, maximum score 20) and documentation, and analysed descriptively with a success criterion of 75%. The score rose from 6 (30%, poor) at baseline to 9 (45%) and 11 (55%) in Cycle I, and to 13 (65%) and 16 (80%, good) in Cycle II, with gains across all indicators, most notably response to instructions and movement coordination. Within the limits of a single subject, Adaptive Practice Style combined with demonstration, visual media, repeated practice, immediate feedback, and individual assistance improved running skill, participation, and confidence

KEYWORDS: adaptive practice style, locomotor skills, running, intellectual disability, inclusive education I.

INTRODUCTION

Inclusive education aims to provide equal, meaningful, and personalised learning to all students, including those with intellectual disability (UNESCO, 2020). Elementary schools must therefore adapt their learning processes, including Physical Education, Sports, and Health (PJOK), to accommodate students with diverse abilities. PJOK supports physical, motor, social, emotional, and cognitive development, and fundamental movement skills form the foundation of later motor development. Running is one of the basic locomotor skills that must be mastered because it supports mobility, body coordination, balance, and everyday activity; well-developed fundamental movement skills in childhood are associated with greater physical activity and quality of life later on (Logan et al., 2021).

Intellectual disability is characterised by significant limitations in intellectual functioning and adaptive behaviour that originate before adulthood (AAIDD, 2023). Children with intellectual disability tend to have lower coordination, balance, and fundamental motor skills than their peers and need instruction that is more structured, repetitive, and adaptive (Haegele & Zhu, 2022; Obrusnikova & Dillon, 2022). In practice, however, PJOK teachers often rely on conventional, teacher-centred methods that give the same instruction to every student, with little modification of activities, repetition, or individual assistance (Lieberman & Houston-Wilson, 2020).

Previous studies have shown that adapted physical education improves physical fitness and motor skills of students with special needs (Pan & McNamara, 2020; Haegele & Zhu, 2023) and that adaptive pedagogical strategies increase participation (Rakaa et al., 2025). Nevertheless, these studies mostly addressed general fitness, general motor skills, or inclusive-PE concepts; many were experimental or quasi-experimental or were literature reviews, and few examined a specific teaching style for a specific skill such as running. To the authors' knowledge, the Practice Style from the Spectrum of Teaching Styles (Mosston & Ashworth, 2021) has not been implemented in classroom action research to improve running among Grade II students with intellectual disability in an inclusive elementary school.

The Practice Style lets students rehearse a task repeatedly at their own pace while the teacher gives individual feedback. When adapted through simple instructions, direct demonstration, visual aids, physical and verbal prompts, and adjusted task difficulty, it fits the need of students with intellectual disability for concrete, gradual, and repeated learning. Preliminary observation at State

Elementary School 002 Batu Ampar showed that Grade II students with intellectual disability had difficulty coordinating hand and foot movements, keeping a steady running rhythm, and maintaining focus, and participated little in PJOK. This study therefore asked: (1) what was the student's initial running skill; (2) how was the Adaptive Practice Style implemented; (3) was it effective in improving running skill; and (4) how did the student's activity and participation change?

II. METHODOLOGY

This study used Classroom Action Research (CAR) following the Kemmis and McTaggart model, in which each cycle comprises planning, acting, observing, and reflecting (Kemmis et al., 2021; Mertler, 2021). Two cycles were planned, each with two sessions. The research combined quantitative data (rubric scores) with qualitative description of the learning process and student responses.

Planning: a Teaching Module based on the Adaptive Practice Style, cones, track lines, a whistle, observation and assessment instruments, success indicators, and simple structured learning steps were prepared. Acting: each session (2 × 35 minutes) began with greeting, warm-up, and apperception, followed by a core activity in which the teacher demonstrated correct running, and the student progressed gradually from walking to jogging to running over short tracks with repetition, simple instructions, modified tasks, feedback, positive reinforcement, and individual assistance; sessions ended with cool-down, brief reflection, and motivation. Pre-action observation was on 7 April 2026; Cycle I sessions were on 14 and 21 April 2026 and Cycle II sessions on 5 and 12 May 2026. Based on the Cycle I reflection, Cycle II added clearer visual media (pictures of the running sequence), varied running activities (straight, to a target, and simple zig-zag), more frequent repetition, more intensive positive reinforcement, and more focused individual assistance.

III. RESULTS AND DISCUSSION

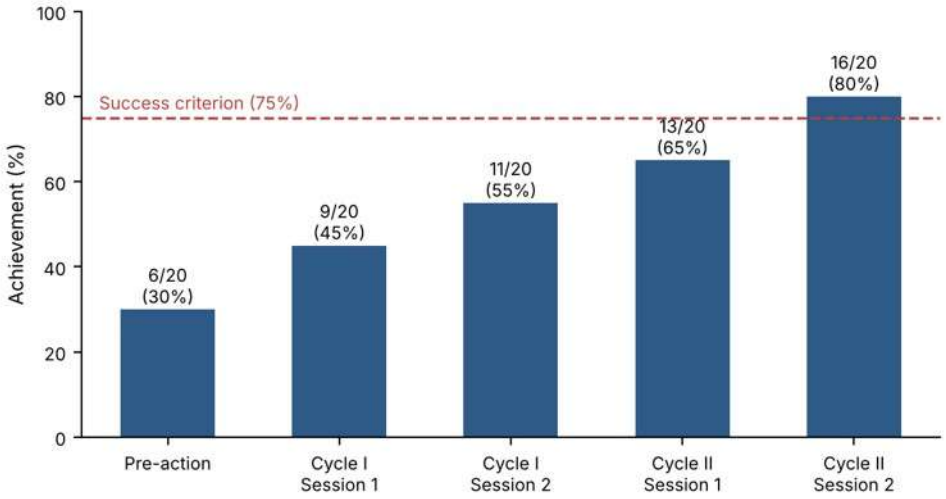
Before the action, MI scored 6 out of 20 (30%, poor). MI could not move the arms and legs in a coordinated way, the arm swing did not follow the rhythm of the steps, the body was held too upright with frequent loss of balance, and instructions had to be repeated more than twice. MI was also less confident, often waited for the teacher's help, avoided activities requiring complex coordination, and lost focus easily.

In Cycle I, observed scores rose from 9/20 (45%) in the first session to 11/20 (55%) in the second (Table 1). MI began to coordinate the hands and feet better, the running posture became more stable, and MI followed simple instructions and participated more actively. However, hand–foot coordination was still unstable, MI still needed verbal prompts and repeated demonstration, concentration was easily distracted, and the exercises needed more intensity and variety. The 75% success criterion was not reached, so a second cycle was planned.

With visual media, varied running tasks, more repetition, stronger positive reinforcement, and more focused individual assistance, the score rose to 13/20 (65%) in the first session and 16/20 (80%, good) in the second. The largest gain was in response to instructions, which reached the maximum score of 4. MI was more focused, took initiative to try movements independently with minimal guidance, coordinated hands and feet more smoothly and regularly, and showed more confidence and enjoyment. The success criterion (75%) was met, and the research was stopped at Cycle II.

Table 1. Observation scores of the student (MI) per indicator across sessions (scale 1–4)

Indicator	Cycle I Session 1	Cycle I Session 2	Cycle II Session 1	Cycle II Session 2
Attention	2	3	3	3
Activity in learning	2	2	2	3
Movement coordination	1	2	2	3
Response to instructions	2	2	3	4
Learning enthusiasm	2	2	3	3
Total (max. 20)	9	11	13	16
Percentage	45%	55%	65%	80%



V. CONCLUSIONS

The findings show that practice based on an Adaptive Practice Style improved the student's running from the poor category (30%) to the good category (80%) over two cycles. The gradual rise across sessions, together with improved attention, activity, coordination, instruction response, and enthusiasm, indicates that the approach suited the learning characteristics of a student with intellectual disability. The initial difficulties—poor coordination, balance, and instruction processing—are typical of the cognitive and adaptive-behaviour limitations of intellectual disability.

Cycle I produced gains but not enough to meet the criterion; coordination and rhythm remained difficult. This suggests that this student needed more intensive practice, repetition, and individual support, and the Cycle II refinements (visual media, varied tasks, positive reinforcement, individual guidance) were followed by improvements in all indicators, particularly coordination and response to instructions. These results are consistent with the Practice Style principles of repeated and independent practice with teacher feedback, with research showing that repeated, adapted motor activities benefit students with intellectual disability (Obrusnikova & Dillon, 2022; Widodo & Kurniawati, 2024), and with evidence that adaptive strategies increase participation of students with special needs (Rakaa et al., 2025). Increased confidence and participation also match the view that positive feedback and practice without competition create a safe learning climate for these students. Together, the findings support personalised, student-centred teaching over conventional instruction that ignores individual ability.

REFERENCES

1) American Association on Intellectual and Developmental Disabilities (AAIDD). (2023). Definition of intellectual disability.Tavel, P. 2007 Modeling and Simulation Design. AK Peters Ltd.
2) Creswell, J. W., & Creswell, J. D. (2021). Research design: Qualitative, quantitative, and mixed methods approaches. SAGE.Brown, L. D., Hua, H., and Gao, C. 2003. A widget framework for augmented interaction in SCAPE.
3) Goodway, J. D., Ozmun, J. C., & Gallahue, D. L. (2021). Understanding motor development: Infants, children, adolescents, adults. Jones & Bartlett Learning.Spector, A. Z. 1989. Achieving application requirements. In Distributed Systems, S. Mullende
4) Kemmis, S., McTaggart, R., & Nixon, R. (2021). The action research planner. Springer.Fröhlich, B. and Plate, J. 2000. The cubic mouse: a new device for three-dimensional input. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.
5) Bowman, M., Debray, S. K., and Peterson, L. L. 1993. Reasoning about naming systems. Mertler, C. A. (2021). Action research: Improving schools and empowering educators. SAGE.

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