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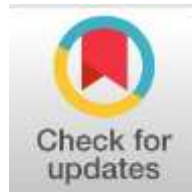
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Interactive Multimedia And Direct Instruction Elevate Volleyball Mastery For Slow Learners: Multimedia Interaktif Dan Instruksi Langsung Mengangkat Penguasaan Voli Siswa Lamban Belajar

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Abstract

General Background Physical education requires adaptive pedagogical strategies that respond to the varied cognitive and psychomotor developmental needs of students in inclusive settings. **Specific Background** Slow learners typically process information gradually, struggle with complex directions, and require repeated visual demonstrations and systematic scaffolding to successfully acquire motor competencies. **Knowledge Gap** While digital visualizations and explicit teaching frameworks individually support skill acquisition, their integrated application remains underexplored for this specific demographic in athletic contexts. **Aims** This study investigates the application of direct instruction paired with interactive multimedia to advance the volleyball mastery of seventh-grade students. **Results** Through a three-cycle action research design, mean performance scores progressed significantly from a pre-cycle baseline of 76.18 to 92.43 by the final cycle. Furthermore, classical proficiency levels surged from 20% to a consistent 100%, alongside notable improvements in student classroom engagement and independent practice behaviors. **Novelty** This research uniquely merges multimedia cognitive theory with explicitly structured sequencing to create an accessible, highly tailored psychomotor learning environment for cognitive learning difficulties. **Implications** Deploying visually supported, systematic models provides educators with a proven strategy to optimize movement execution and promote active participation among students with special educational needs.

Highlights

- ♦ The structured pedagogical intervention raised the average performance scores of participants from 76.18 to 92.43 across three action cycles.
- ♦ Proficiency levels in underhand passing and serving techniques surged from a 20% baseline to a complete 100% attainment.
- ♦ Seventh-grade students with borderline intellectual functioning demonstrated greater classroom engagement and independence during practical physical education tasks.

Keywords

Interactive Multimedia; Direct Instruction; Slow Learners; Volleyball Mastery; Physical Education

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INTRODUCTION

The Physical Education, Sports and Health (PESH) plays a strategic role in the development of students' physical competence, cognitive abilities, social skills and character through organized physical activities. Today's physical education is not just about increasing physical fitness, it is about developing problem solving skills, cooperation, discipline, self-confidence and lifelong participation in physical activity. Therefore, effective physical education requires instructional strategies that respond to the varied learning characteristics and developmental needs of students. That expectation is even more critical in inclusive education settings with students of diverse cognitive, physical, and psychosocial profiles (SHAPE America, 2024). The essential learning outcomes for junior high physical education are to learn basic volleyball skills of underhand pass, overhead pass and serving. These motor skills require coordination, balance, timing, spatial awareness and practice over time. During early adolescence, students typically show rapid gains in neuromuscular coordination and motor learning, which enables them to learn more complex sport-specific skills. However, differences in cognitive readiness, motivation and motor competence often affect students' ability to learn these techniques (Estevan et al., 2021). Hence, teachers need to develop instructional methods that correspond to the developmental characteristics of the students and their individual learning needs.

These educational challenges are compounded when students being taught are identified as slow learners. Students with slow learning are likely to have borderline intellectual functioning. They usually process information slowly, have a low working memory capacity and have difficulty understanding complex instruction. They also require more repetition and scaffolding. They do not meet the diagnostic criteria for intellectual disability, but require differentiated instructional approaches to obtain comparable learning outcomes to those of their peers. Previous literature indicates that visual supports, explicit demonstrations, simplified instructions, and repeated practice are significantly effective in improving learning performance in students with borderline intellectual functioning (Blasi et al., 2020; Cheon, 2024). These cognitive limitations often affect learning of motor skills in physical education. Slow learning characteristics often need more demonstrations, systematic practice, immediate corrective feedback, and sequential instruction before they can successfully perform movement patterns on their own. In a systematic review, Maïano et al. (2019) reported that children with intellectual limitations generally show poorer fundamental movement skills than their typically developing peers. Özkan and Kale (2023) also underlined the significance of adaptive physical education programs designed according to students' functional characteristics for the development of motor competence and general participation in physical activities. These findings indicate that students with cognitive learning difficulties are in special need of structured instructional interventions.

Recent advances in educational technology have provided opportunities to enhance motor learning via multimedia instruction. According to the Cognitive Theory of Multimedia Learning, the simultaneous presentation of verbal and visual information aids in deeper information processing and reduces extraneous cognitive load (Mayer, 2021). Interactive instructional videos can allow students to witness demonstrations of movements multiple times, visualise sequences of movement and have a more meaningful learning experience compared with traditional verbal explanations alone. A recent systematic review also showed that video-based feedback significantly improves the acquisition of motor skills, the accuracy of movements and the technical performance in various physical education contexts (Möding et al., 2022). Romdhane and Khacharem (2023) also pointed out that the use of videos in teaching enhances learning achievement, skill transfer and students' situational interest in physical education classes. Besides instructional media, the choice of an adequate instructional model is also of great importance. Direct Instruction (DI) is one of the most successful methods for teaching procedural knowledge and motor skills because it emphasizes explicit explanation, teacher demonstration, guided practice, independent practice, ongoing monitoring and immediate corrective feedback. According to Rosenshine (2012) and Archer and Hughes (2011), explicit instruction is particularly helpful for students who need structured guidance and systematic scaffolding. Explicit teaching and high-quality feedback are some of the best instructional practices to improve student achievement in educational contexts, Hattie (2023) also found.

While previous research has established the effectiveness of both instructional videos and Direct Instruction, the present research often investigates these pedagogical approaches separately. Video-based learning studies have focused on multimedia effects and visualization of motor skills. Direct Instruction studies have focused on explicit teaching procedures and guided practice. There is very limited research that explores the integration of interactive video media in Direct Instruction framework to improve volleyball skills for slow learner students in inclusive junior high schools. The limitation is a significant research gap because slow learners require structured teaching, repeated demonstrations, visual representations and continuous teacher support throughout the entire learning process. In view of these theoretical and empirical lacunae, the pairing of interactive video media with the Direct Instruction model shows immense potential for enhancing motor skills acquisition among slow learner students. It is also possible that interactive videos can improve observational learning by repeated visual demonstrations. Direct Instruction offers systematic scaffolding to gradually increase independent motor performance. These two instructional components are expected to create more accessible and effective learning environment for students with cognitive learning difficulties due to their complementary characteristics. Therefore, this study aims to investigate the implementation of interactive video media based on Direct Instruction to improve volleyball skills of slow learner students at SMPIT Daarussalaam Sangatta, East Kutai Regency. The findings are expected to offer contributions to the development of evidence-based instructional practices in inclusive physical education, providing practical recommendations for teachers who are seeking effective strategies to improve motor learning outcomes for students with special educational needs.

METHOD

This research used Classroom Action Research (CAR) based on the spiral model of Kemmis and McTaggart which consists of four recurring stages, namely planning, acting, observing and reflecting. The CAR approach was selected because it allows

teachers to systematically improve their instructional practices through continuous cycles of intervention and reflection. This research was conducted in the second semester of the 2025/2026 academic year at SMPIT Daarussalaam Sangatta, East Kutai Regency, an inclusive junior high school that provides educational services to students with diverse learning needs. The intervention was on the development of basic volleyball skills of students, through the use of the application of the interactive video media based on the direct instruction. The subjects of the study were 20 seventh grade students who were classified as slow learners based on clinical assessment reports, academic evaluation records, and the recommendations of classroom and guidance teachers. The learners had different learning characteristics such as needing intensive support, needing repeated demonstrations and guided practice due to their slower information processing and problems with understanding complex instructions. These characteristics were taken into consideration in the design of the instructional intervention to ensure that the learning activities matched the students' cognitive profiles and individual learning needs. The intervention consisted of three action cycles preceded by a pre-cycle assessment to determine the initial volleyball skills of students. Each cycle followed the Direct Instruction sequence by presenting learning objectives, showing interactive instructional videos, providing teacher demonstrations, conducting guided practice, providing immediate feedback, and allowing students to practice independently. The instructional focus changed from cycle to cycle. Cycle I focused on the underhand passing technique, Cycle II focused on the underhand serve, and Cycle III combined the two skills with combined practice activities. Findings from reflection were used to revise the instructional strategy for the next cycle at the end of each cycle.

The data were collected through tests of skills performance, classroom observations, field notes, documentation, and observation sheets to assess teacher implementation and student participation. The performance of volleyball was assessed by the use of scoring rubrics for the movement preparation, execution, and follow-through of the underhand passing and serving techniques. Prior to implementation, all research instruments were subjected to expert judgment to determine content validity. The quantitative data were analyzed through descriptive statistics such as mean scores and classical mastery percentages while the qualitative data from observations and field notes were analyzed through data condensation, data display, and conclusion drawing to describe the change in learning behaviors of students during the intervention. This research is successful if at least 75% of students meet the predetermined mastery criterion (score ≥ 80) and show improvement in learning participation and volleyball skills in each cycle of learning.

RESULT AND DISCUSSION

Pre-Cycle Results

The pre-cycle stage was conducted with the aim of obtaining an objective baseline of volleyball skills of slow learner students before the intervention was carried out using Direct Instruction-based interactive video media. During this phase, the teacher taught using the traditional method widely used in the classroom that consisted of verbal explanations, along with live demonstrations of essential volleyball skills. Then, the students were asked to perform the underhand pass and underhand serve individually to find out their initial skill levels. Classroom observations were also conducted to assess students' learning activities in addition to performance assessment, which provided baseline data for planning the next action cycles. In the first classroom observations the current instruction has not yet fully accommodated the learning characteristics of slow learner students. The majority of students struggled to follow the teacher's instructions, especially when several procedural steps were presented within a short period. Some students had to see the movements demonstrated several times before they were comfortable to try them out and some had difficulty in remembering and using the right order of techniques. The results indicate that the traditional teaching approach, based mostly on verbal explanations and individual demonstrations, did not offer enough visual support for the students to achieve a holistic understanding of fundamental volleyball skills.

Students' learning engagement on the pre-cycle was also relatively limited. Most students were passive during classroom instruction, gave minimal responses to teacher questions and waited for direct guidance before beginning practice activities. Some students expressed low self-confidence in themselves during the skill practice and did the movements hesitantly. Besides, many students were easily distracted and required frequent reminders and repeated instructions by the teacher to focus their attention during the lesson. The observation results show that the average score of the learning activity was 74.70 in the fair category, meaning that the level of participation and student engagement still needed improvement. The first skill assessment also showed that the volleyball performance of students was still below the standard of expectation. The average score of the class was 76.18 which was below the Minimum Learning Mastery Criterion (MLMC) of the school at 80. Of the 20 students who participated in the study, only 4 students (20%) reached mastery while the remaining 16 students (80%) did not reach the required criterion. The results showed that most students have not mastered the basic skills of the underhand pass and underhand serves. The most frequent mistakes were wrong body position, lack of coordination between upper and lower body movements, poor anticipation of the ball coming in and lack of ball control in contact.

The unsatisfactory learning outcomes were closely related to the cognitive characteristics of slow learner students who usually need additional processing time, repeated demonstrations, and persistent instructional support in acquiring skills. The traditional teaching method, based primarily on the demonstration of the teacher, did not allow students to remember and independently reproduce the sequences of movements during practice. Therefore, teachers had to show and correct the movements of the students many times, which reduced the efficiency of the learning process in general. The results of this study suggest the need for instructional media that can present movement demonstrations clearly, systematically and repeatedly, which can better accommodate the learning needs of slow learner students. From the result of pre-cycle stage it can be concluded that the volleyball skills of students and the activities of learning in the classroom have not reached the success criteria that have been determined. Therefore, it is necessary to improve the learning process by applying interactive video media based on Direct Instruction which is expected to make the demonstration of the material more

visible, understand the techniques of playing volleyball step by step, increase students' attention and active involvement, and finally improve student mastery in the underhand pass and underhand serve in the next action cycles.

Results of Cycle I

The first action cycle, students' underhand passing skills using interactive video media based on Direct Instruction were improved. The instructional activities followed the sequential phases of Direct Instruction namely lesson orientation, presentation of learning objectives, video-assisted demonstration of the underhand passing technique, guided practice under teacher supervision, immediate corrective feedback, and independent practice. Students could observe the correct movement patterns several times before performing the movements and the interactive video provided clearer visual representations of the technical procedures. The implementation of the intervention has significantly improved the performance of the students in volleyball compared to the pre-cycle condition. The average skill score also increased to 89.55, above the school's Minimum Learning Mastery Criterion (MLMC) of 80. In addition, 20 students (100%) attained learning mastery, which means that all students did well in the implementation of the underhand passing technique after the first cycle. Results of this study indicated that the combination of interactive video and explicit instructional procedures was effective in promoting students' understanding and performance of the targeted motor skill.

Table 1. *Learning Outcomes in Cycle 1*

Description	Result
Mean Score	89.55
Students Achieving Mastery	20
Students Not Achieving Mastery	0
Classical Mastery	100%

Also, there were improvements in students' learning engagement during classroom activities. The average score of learning activity was 82.10 that was categorized as good. Students paid more attention while watching the instructional videos, actively followed teachers' demonstrations and were more confident in guided and independent practice sessions. In contrast to the pre-cycle condition, students were more willing to participate in hands-on activities and needed fewer prompts to remain focused during the entire lesson.

Table 2. *Student Learning Activities in Cycle I*

Description	Result
Mean Activity Score	82.10
Category	Good

Moreover, classroom observations indicated that the Direct Instruction model was implemented with fidelity to the planned instructional procedures. The teacher was successful in every instructional phase of lesson orientation and explanation of learning objectives, presentation of interactive instructional videos, teacher demonstrations, guided practice, immediate feedback, and independent practice. The execution of it was mostly successful but some students required individual assistance and multiple demonstrations in the guided practice stage as they found it difficult to recall the order of movements and correctly integrate the positioning of the body. However, interactive videos significantly enhanced the visualization of movements, allowing students to observe and replicate the correct technique more precisely than in traditional teaching. As a result, students showed improved technical performance, increased confidence, and greater participation throughout the learning process, suggesting that the intervention was successful in improving both motor skill acquisition and classroom engagement during the first cycle.

Results of Cycle II

The second action cycle was designed to improve the underhand serving skills of the students and at the same time to implement the interactive video media based on Direct Instruction. The learning procedures were similar to the learning procedures in Cycle I. The learning procedures consisted of orientation learning, explanation of learning objectives, presentation of interactive instructional videos, teacher demonstrations, guided practice, immediate corrective feedback, and independent practice. Based on the analysis of the previous cycle, some improvements of the teaching process were applied, including more detailed demonstrations, provision of more opportunities to watch the video repeatedly, and giving special attention to students who still had difficulty in serving technique. The learning outcome achieved in Cycle II indicated that students could maintain a high level of performance in the instructional process. The average score of the class was 84.85, still above the Minimum Learning Mastery Criterion (MLMC) of the school, which was 80. Besides, all students (100%) were able to achieve the level of mastery of learning. It means that all students could perform the underhand serve according to the performance indicators expected. The mean score was slightly lower than that obtained in Cycle I, but this may be due to the higher technical complexity of the underhand serve, which requires more precise coordination, timing and control of the ball than the underhand passing technique. However, the overall learning outcomes suggest that the instructional intervention was still very successful in facilitating students' motor skill acquisition.

Table 3. *Learning Outcomes in Cycle II*

Description	Result
Mean Score	84.85
Students Achieving Mastery	20
Students Not Achieving Mastery	0
Classical Mastery	100%

Students' classroom engagement also continued to improve in the second cycle. The average score of the learning activities [ISSN 2714-7444 \(online\)](https://doi.org/10.21070/acopen.11.2026.15166), <https://acopen.umsida.ac.id>, published by [Universitas Muhammadiyah Sidoarjo](https://www.umsida.ac.id)

increased to 84.90 with a good category. Students were more enthusiastic and actively engaged in the instructional process especially when guided practice was used. Compared with before the cycle, students were more confident in performing the underhand serve, responded better to the teacher's feedback, and were more focused when watching the interactive instructional videos. The repeated visual demonstrations allowed students to better understand the correct movement sequence before practicing independently.

Table 4. Student Learning Activities in Cycle II

Description	Result
Mean Activity Score	84.90
Category	Good

The classroom observations also showed that the implementation of the Direct Instruction model became more systematic and effective in Cycle II. The teacher was successful in optimizing each phase of the instruction by making clearer demonstrations, increasing the frequency of interactive video presentations, and providing individual assistance to students with technical difficulties. The underhand serve was a more difficult motor skill than the underhand pass, requiring greater coordination and movement precision. However, most students showed continued improvement following repeated guided practice and immediate corrective feedback. The reflective evaluation revealed that the integration of structured, explicit teaching and the use of interactive video media are able to help students to learn complex volleyball skills, with high classroom participation and learning achievement.

Results of Cycle II

The third action cycle was designed to increase students' mastery of both underhand passing and underhand serving through integrated practice activities utilizing interactive video media based on Direct Instruction. Unlike previous cycles, where learning of individual techniques was the main focus, in Cycle III the integration of both fundamental volleyball skills into one learning sequence was required. The instructional procedures consisted of lesson orientation, presentation of learning objectives, interactive video demonstrations, guided practice, immediate corrective feedback, and independent practice, all in line with the Direct Instruction model. The emphasis was on practicing and practicing and perfecting skills so that students could perform both techniques accurately and confidently. According to the evaluation results students showed the highest performance level for this cycle. The mean score of the class was 92.43 which was the highest score obtained in the study which was above the Minimum Learning Mastery Criterion (MLMC) of the school. In addition, all 20 students (100%) were able to achieve successful learning mastery. This means that all students have been able to perform the underhand pass and underhand serve according to the performance indicators. Students showed more accurate movements, smoother coordination and more consistent execution of volleyball techniques than previous cycles.

Table 5. Learning Outcomes in Cycle III

Description	Result
Mean Score	92.43
Students Achieving Mastery	20
Students Not Achieving Mastery	0
Classical Mastery	100%

The results of the classroom observation showed that the implementation of the Direct Instruction model was at optimum level in Cycle III. The teacher efficiently controlled the different stages of the lesson by providing clear demonstrations, a sequence of exercises, immediate feedback to correct the errors, and consolidation of students' successes. The combination of interactive instructional videos and guided practice allowed students to identify and correct movement errors independently and increased their procedural knowledge of volleyball techniques. Consequently, students showed greater enthusiasm, confidence and active involvement in the learning process. Their technical execution also became more accurate and consistent, reflecting the cumulative effect of repeated practice and explicit instruction over the three action cycles.

The general results of the classroom action research show that there is a constant improvement of students' volleyball skills after the application of interactive video media based on Direct Instruction. The average score before the cycle is 76.18, then in Cycle I it increases to 89.55, an increase of 13.37 points after students have the material of the underhand passing technique. Cycle II showed a slight decrease with an average score of 84.85; this decline is linked to the increased technical difficulty of the underhand serve, which demands more coordination, timing and ball control. With instructional improvements with more intensive guided practice and individual feedback, students improved significantly on Cycle III with a mean of 92.43, gain of 7.58 points from Cycle II. The intervention resulted to a cumulative gain of 16.25 points from the baseline assessment which signifies the effectiveness of integration of interactive video media with the Direct Instruction model in improving the volleyball skills of slow learner students .

Table 6. Summary of Learning Outcomes

Stage	Mean Score	Classical Mastery
Pre-Cycle	76.18	20%
Cycle I	89.55	100%
Cycle II	84.85	100%
Cycle III	92.43	100%

The mastery learning results further confirm the effectiveness of the intervention. Only 20 percent of the students met the mastery criterion required prior to implementation of the instructional strategy. After the implementation of Direct

Instruction-based interactive video media, the classical mastery increased dramatically to 100% in Cycle I and remained consistently at 100% in Cycles II and III. This continued success suggests that the intervention was not only effective in improving students' immediate performance but also in sustaining and further developing their volleyball skills through successive learning cycles. The results reveal that the combination of explicit instruction and interactive multimedia is effective in facilitating the acquisition of motor skills, the participation of learners in active learning, and the learning achievement of slow learner students in inclusive physical education settings.

The classroom observations demonstrated a consistent improvement in students' learning engagement throughout the implementation of the intervention. The average learning activity score increased from 82.10 in Cycle I to 84.90 in Cycle II, with both cycles classified as good, indicating greater attention, participation, and independence during the learning process. Students became more focused when observing the interactive instructional videos, followed the teacher's instructions more accurately, and showed greater confidence during guided and independent practice. In addition, the implementation fidelity of the Direct Instruction model reached a very high level throughout the study, improving from 90% in Cycle I to 100% in Cycles II and III. All instructional phases—including lesson orientation, explicit demonstration, guided practice, immediate feedback, reinforcement, independent practice, and evaluation—were implemented consistently according to the planned instructional procedures, ensuring that the intervention was delivered effectively and systematically across all action cycles.

Discussion

The result of this classroom action research shows that the application of interactive video media with the Direct Instruction model effectively improves the volleyball skills of slow learner students at SMPIT Daarussalaam Sangatta. The significant increase in student learning outcomes (average score increased from 76.18 in the pre-cycle to 92.43 in Cycle III) and classical learning mastery (increased from 20% to 100%) indicate the success of the intervention. These results indicate that a combination of explicit instruction and interactive multimedia makes the learning environment more accessible to students who have difficulty processing verbal information and learning complex motor skills. The repeated visual demonstrations allowed students to see the movement sequences repeatedly and to better understand the techniques of underhand pass and underhand serve. The current results are in line with Mayer's (2021) Cognitive Theory of Multimedia Learning, which states that learning is more effective if verbal explanations are combined with meaningful visual representations. Interactive instructional videos reduce unnecessary cognitive load by presenting information through both visual and auditory channels concurrently, enabling learners to process information more efficiently. This instructional quality is especially advantageous to slow learner students who typically need concrete examples, repeat demonstrations and extra processing time before they can perform motor tasks successfully on their own. Students could also learn at their own pace, which improved procedural understanding and motor execution, by being able to replay demonstrations multiple times.

All students were able to achieve learning mastery starting from Cycle I. However, the average score decreased slightly from 89.55 in Cycle I to 84.85 in Cycle II. This temporary decrease can be reasonably explained by the higher complexity of the underhand serve compared with the underhand passing technique. A good underhand serve requires more coordination of body position, arm swing, contact with the ball, balance and timing of movement. For slow learning characteristics of students simultaneous integration of these motor components is more demanding in terms of cognitive and psychomotor. Reflective evaluation after Cycle II resulted in instructional improvements including more intensive guided practice, repeated video demonstrations and individualized corrective feedback. The modifications were successful as evidenced by the increase in the mean score to 92.43 in Cycle III which shows that continuous instructional refinement is essential in optimizing motor skill acquisition of slow learner students. The results of this study are consistent with previous studies that have shown the efficacy of video-assisted instruction in physical education. Mödinger et al. (2022) found that video-based feedback greatly improves motor skill acquisition, movement accuracy and technical performance. This is due to students being able to watch the correct movements over and over again and being able to identify and fix their own performance. In the same way, Romdhane and Khacharem (2023) also found that instruction videos enhance learning achievement, facilitate transfer of skills, and increase situational interest of students during physical education lessons. Building on this work, the present study demonstrates that interactive videos are even more effective when embedded in an organized instructional framework such as Direct Instruction, especially for students with special educational needs who require systematic guidance and repeated visual support.

In addition to the role of interactive video media, the systematic implementation of the Direct Instruction model was also an important factor in improving students' learning outcomes. A systematic sequence of instructional steps (lesson orientation, explicit explanation, teacher modeling, guided practice, immediate feedback, reinforcement, and independent practice) provided the students with a structured scaffolding to progressively acquire mastery of complex motor skills. These results support the instructional principles articulated by Rosenshine (2012) and Archer and Hughes (2011) who assert that explicit instruction is highly effective for students who need intensive guidance and clearly structured learning experiences. The fidelity of implementation of the Direct Instruction model was maintained during the intervention providing the students with adequate opportunities for practice, corrective feedback, and successive refinement of their volleyball techniques. The intervention not only improved technical performance, but also increased students' engagement in the classroom and participation in learning. Observation data showed continued increases in student attention, confidence, willingness to participate, and independence across instructional cycles. Students were more attentive when watching the interactive videos, responded more actively to the teacher's guidance, and were more confident in the practical activities. The behavioral improvements indicate that interactive multimedia not only enhances cognitive understanding but also promotes motivation and active involvement in learning. Higher levels of engagement are especially important for slow learner students as successful motor learning is dependent on sustained attention and repeated participation. The study gives empirical evidence that the use of interactive video media with the Direct Instruction model is an effective instructional strategy in improving volleyball skills of slow learner students in inclusive junior high school settings. All predetermined success indicators related to the intervention were reached: full classical mastery, significant improvement of motor skill performance, increased participation in learning, and high implementation fidelity of the instructional model. These findings

add to the increasing evidence base for implementing structured multimedia-assisted instruction in adaptive physical education and underscore its potential as an effective teaching method for students with varied cognitive profiles.

CONCLUSION

The results of this classroom action research show that the application of interactive video media based on Direct Instruction are effective to improve the volleyball skills of slow learner students in Grade VII at SMPIT Daarussalaam Sangatta, East Kutai Regency. The intervention was systematically executed through the phases of lesson orientation, explicit instruction, interactive video demonstrations, guided practice, immediate feedback, and independent practice, enabling students to observe and practice fundamental volleyball techniques multiple times at their own learning pace. The learning model has caused a significant increase in the learning process and learning outcomes. This is proven by the increase in the mean score from 76.18 in the pre-cycle to 89.55 in Cycle I, 84.85 in Cycle II and 92.43 in Cycle III. While the classical learning mastery has increased from 20% to 100%. Furthermore, students' learning engagement increased at the intervention, which indicates more attention, participation, confidence and independence during practical activities. The results of this study proved that the interactive video media with Direct Instruction model is an effective learning model to improve basic volleyball skills especially underhand pass and underhand serve skills of slow learner students in inclusive physical education classes. The results of this study suggest that physical education teachers should combine interactive video media and Direct Instruction model as an alternative teaching model in teaching motor skills for slow learner students and other students with different educational needs. Schools need to provide adequate technological facilities and promote adaptive instructional practices in inclusive learning environments for the realization of this implementation. Future research could look at the effectiveness of this teaching method in relation to other sports, larger samples of participants and experimental research designs. Other outcome variables to be explored are motivation, self-efficacy, independence in learning and social competence. Students are also encouraged to use the instructional videos for independent practice outside of the classroom to reinforce and retain the motor skills learned in physical education lessons.

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