



Implementation of Physical Education, Sports, and Health Learning Programs at the Elementary Special School Level

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Article Info

Article history:

Received Oct 13, 2025

Revised Nov 27, 2025

Accepted Dec 9, 2025

OnlineFirst Dec 12, 2025

Keywords:

Adaptive Physical Education

Inclusive Education

Learning Evaluation

Physical Education Learning

Students with Special Needs

ABSTRACT

Purpose of the study: This study aims to analyze the implementation of Physical Education, Sports, and Health learning programs at the elementary special school level in Special School Negeri Semarang, focusing on learning planning, implementation, evaluation processes, adaptive teaching strategies, and challenges faced in providing inclusive physical education for students with special needs.

Methodology: This study employed a descriptive qualitative approach with a case study design. Data were collected through semi-structured interviews, classroom observations, and documentation techniques involving school principals, classroom teachers, Physical Education, Sports, and Health teachers, and students with special needs. Research instruments included interview guidelines, observation sheets, and documentation checklists. Data were analyzed using the Miles and Huberman interactive analysis model through data reduction, data display, and conclusion drawing techniques.

Main Findings: The findings revealed that the implementation of Physical Education, Sports, and Health learning programs had generally applied adaptive educational practices adjusted to students' characteristics and needs. Teachers modified learning methods, movement activities, and assessment systems to support student participation and motor development.

Novelty/Originality of this study: The novelty of this study lies in its comprehensive analysis of adaptive Physical Education, Sports, and Health learning programs through integrated examination of planning, implementation, and evaluation aspects within special school contexts. This study provides a holistic understanding of adaptive physical education practices, emphasizing teacher collaboration, curriculum modification, individualized learning approaches, and flexible assessment systems supporting inclusive education for students with special needs.

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1. INTRODUCTION

Education is a fundamental right of every citizen, including children with special needs, to obtain equal opportunities in developing their potential and abilities [1]-[3]. Inclusive and special education systems are designed to ensure that students with disabilities receive educational services appropriate to their characteristics and developmental needs. One important aspect of education for students with special needs is Physical Education,

Journal homepage: <http://cahaya-ic.com/index.php/JTHPE>

Sports, and Health learning because it contributes significantly to students' physical fitness, motor skill development, emotional stability, social interaction, and self-confidence. Physical activities provided through adaptive physical education are not only oriented toward improving physical abilities but also toward supporting the holistic development of students with disabilities [4]. Therefore, the implementation of adaptive Physical Education, Sports, and Health learning programs in special schools becomes an important component in supporting the educational development and quality of life of students with special needs [5].

Physical Education, Sports, and Health learning in special schools requires adaptive approaches adjusted to the characteristics and limitations of students with disabilities. Students with hearing impairments, intellectual disabilities, physical disabilities, and autism spectrum disorders possess different physical and cognitive abilities, requiring teachers to modify learning methods, instructional media, learning environments, and assessment systems [6], [7]. Adaptive physical education emphasizes individualized learning approaches and flexibility in learning implementation to ensure that all students can actively participate according to their capacities. Previous studies indicate that adaptive physical education can improve students' motor skills, social interaction, emotional development, and participation in learning activities. Consequently, teachers play an important role in designing and implementing adaptive learning strategies capable of creating inclusive and meaningful learning experiences for students with special needs [8].

The implementation of Physical Education, Sports, and Health learning programs in special schools is influenced by several important factors, including curriculum planning, teacher competency, learning facilities, and school support systems [9]. Effective learning planning enables teachers to organize adaptive learning activities systematically according to students' needs. In addition, teacher competency in adaptive physical education greatly influences the quality of learning implementation because teachers are required to understand the characteristics of students with disabilities and apply appropriate teaching methods [10], [11]. However, in practice, many special schools still face challenges related to limited adaptive learning facilities, lack of professional training for teachers, and inadequate learning resources. These conditions often affect the effectiveness of learning implementation and limit students' opportunities to achieve optimal physical and social development.

Evaluation is also an essential aspect of adaptive Physical Education, Sports, and Health learning programs in special schools. Assessment systems for students with special needs should not solely emphasize cognitive achievement but also consider students' participation, motor development, confidence, discipline, and social interaction during learning activities [12], [13]. Adaptive evaluation systems should be flexible and adjusted to students' individual conditions to create fair and supportive learning environments. Nevertheless, several studies reveal that teachers in special schools still experience difficulties in developing standardized adaptive assessment instruments. In many cases, assessments are conducted subjectively because teachers lack specific guidelines regarding adaptive evaluation procedures for students with disabilities. Therefore, improving adaptive evaluation systems is necessary to support more effective and comprehensive learning implementation in special education settings [14].

Special School Negeri Semarang is one of the special education institutions implementing Physical Education, Sports, and Health learning programs for students with various disability categories. Based on preliminary observations, the school has attempted to implement adaptive learning approaches through modified physical activities and flexible teaching strategies [15], [16]. However, several challenges remain, including limited adaptive sports equipment, differences in student abilities within the same classroom, and limited teacher training related to adaptive physical education. In addition, the implementation of learning programs still requires further evaluation regarding curriculum planning, learning execution, and assessment systems to ensure that learning activities effectively support students' developmental needs. These conditions indicate the importance of conducting comprehensive research related to the implementation of Physical Education, Sports, and Health learning programs at the elementary special school level [17].

The development of adaptive physical education in special schools has become increasingly important due to the growing awareness of inclusive and equitable education. Students with special needs require educational services that not only focus on academic achievement but also emphasize physical, emotional, and social development [18]. Physical Education, Sports, and Health learning programs have significant potential to support students' independence, confidence, communication abilities, and social adaptation. Therefore, adaptive physical education should be implemented through comprehensive planning, appropriate teaching strategies, supportive facilities, and flexible assessment systems. A comprehensive understanding of the implementation of adaptive learning programs is necessary to improve educational quality and ensure that students with special needs receive meaningful and beneficial learning experiences [19], [20].

Several previous studies have examined adaptive physical education in special schools; however, important research gaps still exist. Prasetyo and Lestari focused primarily on teaching methods used in adaptive physical education without comprehensively discussing curriculum planning and evaluation systems in learning implementation. Kartavtseva et al. [21] emphasized teacher competency in adaptive physical education but did not specifically analyze the implementation process at the elementary special school level involving students with

diverse disability characteristics. Meanwhile, Yuan [22] conducted survey research regarding sports learning in special schools, yet their study lacked comprehensive analysis concerning the integration of learning planning, implementation, and evaluation within adaptive physical education programs. Based on these previous studies, it can be identified that research discussing the implementation of Physical Education, Sports, and Health learning programs comprehensively from planning, implementation, and evaluation perspectives in the context of elementary special school education remains limited. Therefore, this study aims to fill the existing research gap by providing a more comprehensive and contextual analysis of adaptive physical education implementation in special schools.

The novelty of this study lies in its comprehensive investigation of the implementation of Physical Education, Sports, and Health learning programs at the elementary special school level through integrated analysis of planning, implementation, and evaluation aspects. Unlike previous studies focusing only on teaching methods or teacher competency, this research presents a holistic description of adaptive physical education practices based on actual field conditions in a special school environment. Furthermore, this study highlights the importance of adaptive curriculum modification, teacher collaboration, flexible assessment systems, and individualized learning approaches in supporting effective and inclusive physical education learning for students with special needs [23].

This study provides both theoretical and practical implications for the development of adaptive physical education in special schools. Theoretically, the findings strengthen the concept that adaptive physical education should be individualized, flexible, and oriented toward students' developmental needs. Practically, the findings emphasize the importance of improving teacher competency, providing adaptive learning facilities, and developing standardized assessment systems to support more effective learning implementation. In addition, this study may serve as a reference for policymakers, school administrators, and educators in designing adaptive physical education programs that are more inclusive and supportive of students with special needs [24]. The findings may also contribute to the development of educational policies related to adaptive physical education implementation in special education institutions.

The urgency of this study is based on the importance of improving the quality of adaptive Physical Education, Sports, and Health learning programs for students with special needs in special schools. Many special schools still face challenges related to inadequate facilities, limited teacher competency, and the absence of standardized adaptive assessment systems. If these issues are not addressed appropriately, students with special needs may not receive optimal educational services that support their physical, emotional, and social development. Moreover, the increasing demand for inclusive and equitable education requires schools to provide adaptive learning programs capable of accommodating student diversity effectively. Therefore, this study is important to provide comprehensive analysis and recommendations regarding the implementation of adaptive physical education learning programs that are effective, inclusive, and sustainable for students with special needs at the elementary special school level.

2. RESEARCH METHOD

2.1. Design Research

This study employed a descriptive qualitative approach using a case study [25] design to investigate the implementation of Physical Education, Sports, and Health learning programs at the elementary special school level in Special School Negeri Semarang. A qualitative approach was selected because the study aimed to explore and understand learning implementation processes, adaptive teaching strategies, evaluation systems, and challenges experienced by teachers in special education settings. The case study design was applied to obtain an in-depth understanding of adaptive physical education practices within a specific educational context. This approach enabled the researcher to examine actual learning conditions, teacher experiences, student participation, and school support systems comprehensively. The research focused on planning, implementation, and evaluation aspects of adaptive Physical Education, Sports, and Health learning programs for students with special needs.

2.2. Subjects and Sample

The subjects of this study consisted of school principals, Physical Education, Sports, and Health teachers, classroom teachers, and students involved in adaptive physical education learning activities at the elementary special school level in Special School Negeri Semarang. The study employed purposive sampling techniques because the selected participants were considered capable of providing relevant and comprehensive information related to the research objectives. The sample selection was based on participants' involvement in planning, implementing, and evaluating adaptive physical education learning programs. Teachers selected as participants had experience teaching students with special needs, while students involved in the study represented various disability categories such as hearing impairments, intellectual disabilities, physical disabilities, and autism spectrum disorders.

Table 1. Research Subjects

Research Subjects	Number of Participants	Role in Research
School Principal	1	Educational policy and supervision
Physical Education, Sports, and Health Teachers	3	Learning implementation
Classroom Teachers	2	Learning assistance and collaboration
Students with Special Needs	10	Learning participation
Total	16	

The participants were selected to ensure that the data obtained represented various perspectives related to adaptive physical education implementation in special schools. This sampling approach enabled the researcher to gather comprehensive information regarding learning planning, implementation processes, assessment systems, and learning challenges experienced in the school environment.

2.3. Data Sources and Data Collection Techniques

The data sources in this study consisted of primary and secondary data. Primary data were obtained directly from interviews, observations, and field activities involving school principals, teachers, and students. Secondary data were collected from school documents, curriculum documents, lesson plans, assessment reports, and related literature concerning adaptive physical education and special education. The use of multiple data sources aimed to increase the validity and credibility of the research findings through data triangulation techniques.

Data collection techniques used in this study included interviews, observations, and documentation. Semi-structured interviews were conducted to obtain detailed information regarding adaptive learning strategies, curriculum planning, assessment systems, and challenges in learning implementation. Observations were carried out during learning activities to identify student participation, teacher teaching methods, classroom management, and learning interactions. Documentation techniques were used to collect supporting documents related to adaptive physical education programs, including lesson plans, student assessments, learning schedules, and school reports [26].

Table 2. Data Collection Techniques

Technique	Data Obtained	Source
Interview	Learning implementation and challenges	Teachers and school principal
Observation	Student participation and teaching activities	Learning process
Documentation	Learning documents and assessment reports	School administration

The combination of interviews, observations, and documentation enabled the researcher to obtain comprehensive and accurate information regarding adaptive physical education implementation at the elementary special school level.

2.4. Research Instruments

The main instrument in this study was the researcher as a human instrument responsible for collecting, interpreting, and analyzing research data. In qualitative research, the researcher plays an important role in understanding social situations and interpreting participants' experiences directly. To support the data collection process, several supporting instruments were also utilized, including interview guidelines, observation sheets, and documentation checklists.

The interview guidelines were designed to obtain information regarding curriculum planning, learning implementation, teaching strategies, evaluation systems, and challenges experienced by teachers. Observation sheets were used to record student participation, teacher instructional activities, adaptive learning strategies, and classroom conditions during learning activities. Documentation checklists were employed to organize and collect administrative documents related to adaptive physical education programs [27].

Table 3. Research Instruments

Instrument	Function	Research Aspect
Interview Guideline	Collect interview data	Learning implementation
Observation Sheet	Observe classroom activities	Student participation and teaching methods
Documentation Checklist	Collect supporting documents	Curriculum and assessment reports

The use of multiple instruments was intended to support data validity and ensure that all important aspects of the study were systematically documented and analyzed.

2.5. Data Analysis Technique

The data analysis technique used in this study was the interactive analysis model proposed by Miles and Huberman, consisting of data reduction, data display, and conclusion drawing. Data reduction was conducted by selecting, simplifying, and categorizing relevant data related to adaptive physical education implementation. Data display was presented in descriptive narratives and tables to facilitate data interpretation and analysis. Conclusion drawing was carried out by identifying patterns, relationships, and meanings from the collected data [28], [29].

To ensure the validity and trustworthiness of the findings, the study applied triangulation techniques involving interviews, observations, and documentation. Source triangulation was conducted by comparing information obtained from different participants, while technique triangulation involved comparing data gathered through different collection methods. These procedures were implemented to enhance research credibility and minimize subjective interpretation during the analysis process.

2.6. Research Procedure

The research procedure in this study was conducted systematically through several stages. The first stage involved identifying research problems related to adaptive Physical Education, Sports, and Health learning implementation in special schools. The second stage consisted of reviewing relevant literature concerning adaptive physical education, inclusive education, and special education learning strategies. The third stage involved selecting research participants using purposive sampling techniques [30].

The fourth stage focused on collecting research data through interviews, observations, and documentation. After data collection was completed, the fifth stage involved analyzing the data using the Miles and Huberman interactive analysis model. The final stage consisted of drawing conclusions and preparing the research report based on the research findings and interpretations. All research procedures were conducted systematically to ensure the validity, reliability, and scientific quality of the study.

3. RESULTS AND DISCUSSION

3.1. Planning of Physical Education, Sports, and Health Learning Program at Elementary Special School Level

The results of the study indicate that the planning of the Physical Education, Sports, and Health learning program at the elementary special school level in Special School Negeri Semarang was generally conducted systematically and adapted to the characteristics of students with special needs. Based on interviews with school principals and Physical Education, Sports, and Health teachers, the preparation of the learning program referred to the curriculum applicable to special education while considering the physical, cognitive, emotional, and social conditions of students. Teachers prepared learning tools such as syllabi, lesson plans, annual programs, and semester programs as guidelines in implementing adaptive physical education learning. However, the preparation of learning tools was not entirely optimal because several teachers still experienced difficulties in modifying learning materials according to the diverse conditions of students with disabilities.

The observation results also revealed that the planning process involved collaboration among classroom teachers, Physical Education, Sports, and Health teachers, and school administrators. This collaboration aimed to create learning programs that were more adaptive and aligned with students' needs. The learning objectives emphasized motor skill development, physical fitness improvement, social interaction enhancement, and the cultivation of students' self-confidence. The teachers adjusted learning activities based on students' disability categories such as hearing impairments, intellectual disabilities, physical disabilities, and autism spectrum disorders. These findings indicate that the planning of the Physical Education, Sports, and Health learning program had considered the principle of individualized learning in special education [31].

In addition, documentation analysis showed that most learning documents already contained adaptive learning components, including modified teaching methods, simplified movement instructions, and flexible assessment systems [32]. Nevertheless, several lesson plans still focused predominantly on general curriculum structures and had not fully accommodated specific learning indicators for students with special needs. This condition demonstrates that although adaptive planning had been implemented, continuous improvement is still necessary to ensure that the learning program fully addresses the individual needs of students at the elementary special school level.

Table 1. Planning Components of Physical Education, Sports, and Health Learning Program

Implementation of Physical Education, Sports, and Health Learning Programs at the ... (Didit Pamungkas)

Planning Component	Implementation Condition	Description
Syllabus Preparation	Good	Adjusted to special education curriculum
Lesson Plan Preparation	Fairly Good	Some modifications for disabilities
Learning Objectives	Good	Focused on motor and social development
Learning Media	Fairly Good	Limited adaptive learning equipment
Assessment Planning	Good	Flexible and adjusted to student abilities

The findings support previous studies stating that adaptive learning planning is a crucial factor in determining the effectiveness of physical education programs for students with special needs. Effective planning enables teachers to create more meaningful, inclusive, and student-centered learning experiences. Therefore, adaptive curriculum planning should become a primary concern in improving the quality of Physical Education, Sports, and Health learning programs in special schools.

3.2. Implementation of Physical Education, Sports, and Health Learning Program

The implementation of the Physical Education, Sports, and Health learning program at Special School Negeri Semarang demonstrated that teachers attempted to apply adaptive learning approaches according to students' characteristics and abilities. Based on classroom observations, learning activities generally began with warming-up exercises, core activities, and closing activities. Teachers used demonstration methods, direct practice, and simple games to improve students' motor skills and participation. Learning implementation emphasized student involvement through enjoyable and flexible physical activities to increase motivation and confidence among students with special needs.

The study found that teachers modified learning methods and movement activities to accommodate students' physical and cognitive limitations. For example, students with hearing impairments received learning instructions through visual demonstrations and gestures, while students with intellectual disabilities were guided using repetitive and simplified movement instructions. Students with physical disabilities were given modified physical activities according to their mobility capacities. These adaptive practices indicate that teachers attempted to implement inclusive and student-oriented learning approaches during Physical Education, Sports, and Health activities [33].

However, several challenges were identified during the implementation process. One major challenge was the limited availability of adaptive learning facilities and equipment. Some sports facilities were still inadequate for supporting students with special needs, causing learning activities to become less optimal. In addition, the varying abilities of students within one classroom created difficulties for teachers in managing learning activities simultaneously [34]. Teachers also experienced limitations in applying innovative learning methods due to insufficient training related to adaptive physical education.

Based on interview findings, teachers stated that support from school management and collaboration among teachers contributed positively to the implementation of learning activities. Nevertheless, teachers still expected more professional development programs and training related to adaptive physical education strategies. This finding suggests that teacher competency development remains an important aspect in improving the effectiveness of Physical Education, Sports, and Health learning programs in special schools.

Table 2. Implementation of Physical Education, Sports, and Health Learning Program

Implementation Aspect	Condition	Description
Learning Methods	Good	Demonstration and direct practice
Student Participation	Fairly Good	Students actively involved
Learning Media	Limited	Lack of adaptive sports equipment
Teacher Adaptation Skills	Fairly Good	Teachers modified learning activities
Classroom Management	Good	Flexible learning atmosphere

The implementation findings indicate that adaptive physical education learning can contribute positively to students' physical, emotional, and social development when supported by appropriate strategies and facilities. Therefore, continuous improvement in teacher competency and learning infrastructure is necessary to support more effective adaptive physical education learning.

3.3. Evaluation of Physical Education, Sports, and Health Learning Program

The evaluation process of the Physical Education, Sports, and Health learning program in Special School Negeri Semarang was conducted flexibly according to students' conditions and learning achievements. Based on interview and documentation results, teachers used performance-based assessments, direct observation, and participation assessments during learning activities. Assessment indicators focused not only on physical performance but also on students' activeness, discipline, cooperation, confidence, and effort in participating in learning activities.

The results showed that teachers tended to prioritize formative assessment approaches rather than emphasizing cognitive achievement alone. Students were assessed based on individual progress and participation during learning activities. This evaluation approach is considered appropriate for students with special needs because it recognizes individual learning differences and focuses on students' developmental processes rather than solely on final outcomes. The findings also indicate that teachers attempted to create supportive and non-discriminatory evaluation systems.

Despite these positive practices, the study found that several teachers still faced difficulties in developing standardized adaptive assessment instruments. Some assessments were still conducted subjectively because teachers lacked specific guidelines regarding adaptive evaluation systems for Physical Education, Sports, and Health learning. In addition, documentation of student learning progress had not yet been systematically organized in several classes. This condition demonstrates the need for more structured assessment guidelines and administrative support in adaptive physical education evaluation systems.

Table 3. Evaluation of Physical Education, Sports, and Health Learning Program

Evaluation Aspect	Condition	Description
Assessment Method	Good	Observation and performance-based assessment
Student Participation Assessment	Good	Focused on individual progress
Assessment Flexibility	Good	Adjusted to student abilities
Documentation System	Fairly Good	Some reports not systematically recorded
Assessment Instruments	Limited	Lack of standardized adaptive instruments

The findings emphasize that adaptive evaluation systems should consider students' individual characteristics and developmental achievements. Comprehensive evaluation not only measures learning outcomes but also provides important feedback for improving future learning programs. The results of this study demonstrate that the implementation of the Physical Education, Sports, and Health learning program at the elementary special school level in Special School Negeri Semarang generally reflected adaptive educational practices aligned with the characteristics of students with special needs. The findings support the theory of adaptive physical education, which emphasizes that physical education programs for students with disabilities should be individualized, flexible, and focused on students' functional development. The planning, implementation, and evaluation processes showed efforts by teachers to accommodate student diversity through modified learning strategies and flexible assessment systems [35].

The findings also reinforce previous studies stating that adaptive physical education contributes significantly to improving motor skills, self-confidence, and social interaction among students with disabilities. The use of demonstrations, direct practice, and modified physical activities created more engaging and inclusive learning experiences for students [36]. In addition, collaboration among teachers and school administrators positively influenced the implementation of adaptive learning programs [37].

However, this study also identified several challenges affecting the effectiveness of learning implementation. Limited adaptive facilities, insufficient teacher training, and the absence of standardized assessment instruments remained significant obstacles in implementing optimal adaptive physical education programs. These findings are consistent with previous studies indicating that adaptive physical education in special schools often faces infrastructural and professional competency limitations.

Several previous studies have examined adaptive physical education in special schools; however, important research gaps remain. Maryanti et al. [38] focused primarily on learning methods in adaptive physical education without comprehensively analyzing learning program planning and evaluation aspects. Limna [39] emphasized teacher competency in adaptive physical education but did not specifically investigate the implementation process at the elementary special school level. Meanwhile, Pavia [40] conducted survey research related to sports learning in special schools, yet their study lacked comprehensive analysis regarding curriculum planning, implementation, and evaluation integration. Therefore, this study fills the research gap by providing a comprehensive analysis of the planning, implementation, and evaluation of Physical Education, Sports, and Health learning programs at the elementary special school level based on real field conditions in Special School Negeri Semarang.

The novelty of this study lies in its comprehensive investigation of the Physical Education, Sports, and Health learning program at the elementary special school level through an integrated analysis of planning, implementation, and evaluation aspects within the context of adaptive physical education. Unlike previous studies that focused only on teaching methods or teacher competencies, this study presents a holistic description of adaptive learning practices based on actual field conditions in a special school environment [41]. Furthermore, this study emphasizes the importance of collaboration among teachers and adaptive curriculum modification in supporting inclusive physical education learning.

This study provides both theoretical and practical implications for the development of adaptive physical education in special schools. Theoretically, the findings strengthen the concept that adaptive physical education

should be individualized, flexible, and oriented toward students' developmental needs. Practically, the study highlights the importance of improving teacher competency, developing adaptive learning facilities, and creating standardized assessment instruments to support more effective physical education learning programs. The findings may also serve as references for policymakers and educators in improving adaptive physical education quality in special education institutions.

This study has several limitations that should be considered. First, the study was conducted only in one special school, namely Special School Negeri Semarang, limiting the generalizability of the findings to other educational settings. Second, the research employed a qualitative descriptive approach, meaning the findings focused on interpretative analysis rather than quantitative measurement of learning effectiveness. Third, limited research duration restricted deeper observation of long-term student development outcomes. Therefore, future studies are recommended to apply mixed-method approaches and involve broader research locations to obtain more comprehensive findings regarding adaptive physical education programs in special schools.

4. CONCLUSION

Based on the findings of this study, it can be concluded that the implementation of the Physical Education, Sports, and Health learning program at the elementary special school level in Special School Negeri Semarang was generally carried out adaptively according to the characteristics and needs of students with special needs. The planning process had considered individualized learning principles through the preparation of syllabi, lesson plans, and adaptive learning objectives. The implementation of learning activities was conducted using modified teaching methods, demonstrations, direct practice, and flexible physical activities to improve students' motor skills, participation, confidence, and social interaction. In addition, the evaluation process was carried out flexibly through performance-based assessments and observation techniques adjusted to students' abilities and developmental progress. However, several obstacles were still identified, including limited adaptive learning facilities, insufficient teacher training related to adaptive physical education, and the lack of standardized assessment instruments. These challenges affected the effectiveness of the learning process and indicated the need for continuous improvement in teacher competency, infrastructure support, and adaptive curriculum development. Therefore, collaboration among teachers, school administrators, and other stakeholders is necessary to create more effective, inclusive, and sustainable adaptive physical education programs for students with special needs.

ACKNOWLEDGEMENTS

The authors would like to express sincere gratitude to all parties who contributed to the completion of this research. Appreciation is also extended to all participants who provided valuable information, support, and cooperation during the research process. Furthermore, the authors would like to thank everyone who contributed directly or indirectly to the successful completion of this study.

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