



Evaluation of O2SN Achievement Development through Volleyball among Athletes with Speech and Communication Disorders

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Abstract

This study aims to evaluate the development of athletes achievement through volleyball activities in improving physical abilities, social skills, and self-confidence of students with speech impairments at Special Needs School. The data analysis technique used is the Miles and Huberman model, which consists of data reduction, namely selecting and simplifying data according to the research focus; data display by organizing data in the form of tables, matrices, or narrative descriptions; and conclusion drawing or verification by summarizing the evaluation results based on the CIPP model. The population of this study includes all students with speech impairments at Special Needs School who participate in volleyball training programs. The research sample was determined using purposive sampling, which involves selecting informants based on the consideration that they have in-depth knowledge of the achievement development process. The sample consists of three students with speech impairments who participate in volleyball training, one physical education PJOK teacher as the coach, the school principal as the policy maker, and several parents as sources of additional supporting information. The results show that the objectives of the volleyball learning and coaching program at Special Needs School are aligned with the goals of adaptive physical education, namely developing motor skills, social abilities, and achievement potential of students with intellectual speech impaired. The program is also directed as a means of participation in competitive events such as O2SN. This indicates that, at the policy level, the school has demonstrated a commitment to the development of sports achievement for students with special needs. However, program planning has not been fully developed based on an analysis of individual student needs. The learning program still refers to the general curriculum with limited modifications, so it has not yet fully accommodated the characteristics of intellectual limitations, such as the ability to understand instructions, concentration, and short-term memory capacity.

Keywords: CIPP, Physical Education, Speech Disability, Speech Impairment, Volleyball

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INTRODUCTION

Ball sports will have high urgency in the context of physical education because they not only emphasize physical movement, but also aspects of character building for students. According to (Purba, 2024), volleyball requires players to keep moving, jumping, and reacting quickly to the ball, so that it can increase cardiovascular endurance, muscle strength, agility,

and motor coordination. This quote shows that volleyball plays a big role in supporting physical fitness while training complex motor skills. More than that, this game also instills important values such as cooperation, sportsmanship, discipline, and responsibility.

Thus, volleyball can be seen as a comprehensive learning tool that integrates physical, character, and social benefits for students. In addition, because volleyball is a team game, students are encouraged to communicate, work in teams, and control their emotions while playing, which in turn will shape a healthy personality and support positive social skills (Mutohir & Maksum, 2020). In the context of school learning, volleyball is the primary medium for physical education. This game encompasses learning in the cognitive, affective, and psychomotor domains. Through volleyball, teachers can teach various basic techniques, game strategies, and the values of fair play. Thus, volleyball serves not only as a sport but also as a means of character building and strengthening students' overall competencies (Ministry of National Education, 2008).

In a preliminary study at Special Needs School, which began on July 25, 2025, field observations and direct interviews with school officials revealed that the extracurricular volleyball program at the Special Needs School for children with speech disorders had never won a championship. The program is designed to train gross motor skills and body movement coordination, as well as foster teamwork, discipline, and self-confidence in students, particularly those with developmental disabilities. To date, there has been no structured evaluation of this activity, so the development process is proceeding without a clear direction and without benchmarks of achievement that can serve as a basis for further development. This activity also serves as an early development tool to identify students' potential and talents, which can then be directed toward participation in sports competitions and festivals at the district and provincial levels.

One major challenge is the lack of an evaluation and monitoring system specifically designed to assess the development of students with speech disorders in a sports context. This results in students' technical abilities and mental readiness for competition not being able to be accurately and sustainably measured. Furthermore, limited appropriate sports facilities, coaches lacking specialized competency in adaptive sports education, and the absence of a training curriculum tailored to the characteristics of special needs are also major obstacles to developing volleyball performance in special needs schools. In mid-2025, the Special Needs School was reportedly preparing to participate in district-level inclusive sports events, but did

not yet have a training system supported by individual achievement-based assessments, which are crucial to ensuring proportional and sustainable student growth.

These facts indicate a gap between the implementation and development of extracurricular volleyball activities at the Special Needs School. Therefore, a more comprehensive, adaptive, and inclusive approach is needed, involving synergy between the school, parents, the education office, and disability sports organizations. Based on the problem formulation, field evidence indicates that volleyball development in special needs settings Special Needs School is adequate, but only for students with speech and language disorders. This study focuses on preparation for participation in inclusive sports at the district level, but lacks a training system supported by individual achievement-based assessment, which is crucial to ensuring proportional and sustainable student achievement growth. The main focus of this study is to analyze the CIPP model for developing volleyball performance.

With proper planning, competent coaches, and structured evaluation, volleyball development in Special Needs School will not only support students' physical needs, but also be part of the formation of achievement, character, and active participation of students in social and competitive activities equally. Based on the above theory about the importance of evaluating the development of volleyball achievements in Special Needs School, the researcher took the title "Evaluation of O2SN Achievements Development through Volleyball among for the Athletes with Speech and Communication Disorders". Seeing the facts in schools there are problems in evaluating the development of achievements. Therefore, the researcher is interested in studying further the focus of the problem.

This research is crucial for determining the effectiveness of the implementation of developmental evaluations and the challenges encountered during the training process. This evaluation is expected to provide input for developing training strategies that better suit students' needs. Furthermore, the results of this study can also serve as a reference for schools and sports coaches in improving the quality of volleyball performance coaching. Essentially, the purpose of this study was to determine whether volleyball performance evaluations can improve physical abilities, social skills, and self-confidence in students with speech and language disabilities at Special Needs School.

METHOD

Research Participants

This research was conducted at the State Elementary State Special School, a special education institution under the auspices of the Central Java Provincial Education Office. This elementary school is located in Mandiraja District, Banjarnegara Regency, Central Java. Special School plays a vital role in providing educational services for children with special needs, with a total of 240 students, including those with intellectual disabilities, hearing impairments, physical disabilities, visual impairments, and autism. The school environment is conducive, with relatively adequate facilities to support teaching and learning activities.

This research uses an evaluative approach with a qualitative descriptive approach. The evaluation model used is CIPP (Context, Input, Process, Product), which was chosen because it can assess a program or activity comprehensively, starting from the context, input, process, to the final result. The data for this study were obtained through observations, interviews, and documentation conducted at. The data collected included the condition of volleyball facilities and infrastructure, the participation of students with speech and language disorders in training activities, and the views of teachers and coaches regarding the development of sports achievements at the school.

Furthermore, the data also included students' achievement of basic volleyball skills, obstacles encountered during the learning process, and strategies used by teachers to improve student skills. All of this data was systematically analyzed to provide a comprehensive picture of the evaluation of achievement development through volleyball for students with speech and language disorders at Special Needs School. The population in this study was all students with speech and language disabilities at Special Needs School who participated in volleyball training. The research sample was determined using a purposive sampling technique, namely the selection of informants based on the consideration that they have in-depth knowledge of the performance training process.

The research sample consisted of three students with speech and language disabilities who participated in volleyball training, a physical education teacher as a coach, the principal as a policy maker, and several parents as additional information providers. The data analysis technique used was the Miles & Huberman technique, which consists of data reduction, namely the selection and direction of data according to the research focus. Data presentation involves

organizing data in tables, matrices, or narrative descriptions. Conclusions or verification summarize the evaluation results based on the CIPP model.

The second stage is data presentation, which involves organizing data in tables, matrices, or narrative descriptions. This presentation makes it easier for researchers to see patterns, relationships, and meanings of the reduced data. In the context of this study, the data presented includes the results of interviews with physical education teachers, parents, and other relevant parties. Regarding facilities, learning processes, and environmental support, data presentation also provides a clearer picture of the actual implementation of the volleyball program in schools. The final stage is drawing conclusions or verification, which is carried out by summarizing the evaluation results based on the CIPP model.

Researchers assess the context, input, process, and product aspects of the volleyball program to determine its success and the challenges faced. Verification is conducted to ensure that the conclusions drawn are truly supported by valid data. The results of this process are expected to provide concrete recommendations regarding developing achievement through volleyball activities for students with speech and language disabilities.

Sampling Procedures

Research participants were selected using purposive sampling techniques, which were intentionally based on specific criteria relevant to the research objectives. Thus, the sample included one principal, one physical education teacher, one teaching assistant, and nine tenth, eleventh, and twelfth grade students with speech and language disabilities.

Materials and Apparatus

This research includes interview guidelines, observation sheets, school documents related to training programs and student achievement, field notes, and evaluation instruments based on the CIPP model. The tools used in this study included interview sheets, a camera to document activities, stationery for recording data, and a laptop for data processing and analysis. Additionally, volleyball equipment, such as balls, nets, and courts, served as observation tools for evaluating and implementing the training program.

Tabel 1. Research Framework and Instruments
(Based on CIPP Stufflebeam Theory, Ministry of Education and Culture, and Constructivism)

No	Theory	dimensions or stages indicators	Indicator	Items
1.	(Stufflebeam, 2002) Grand Theory : A. CIPP – Context Evaluation B. Minister of Education and Culture for Independent Regulation & Curriculum	Context	Availability of learning facilities and curriculum suitability (Ministry of Education and Culture).	a) a) How is the availability of learning facilities at Special Needs School? b) Teachers and students assess the adequacy of facilities. c) School program documents and training proposals
2.	(Stufflebeam, 2002) Grand Theory : A. CIPP – Input B. Konstruktivisme (Piaget–Vygotsky)	Input	Competence teacher	a) How complete are the learning tools prepared by the teacher? b) Observe the readiness of training equipment, trainer communication techniques c) Attendance list, athlete data, and health records
3.	(Stufflebeam, 2002) Grand Theory : A. CIPP – Input B. Konstruktivisme (Piaget–Vygotsky)	Process	Learning and collaboration processes	a) How active are students in the learning process? b) b) Observing the process of implementing activities, student participation and interaction, as well as obstacles

				or barriers that occur in the field.
				c) Documentation of training activities
4.	(Stufflebeam, 2002) Grand Theory : A. CIPP – Product B. Independent Curriculum – Pancasila Student Profile	Product	Student learning outcomes and changes in attitudes	a) How well did students master the material after the lesson? b) Observing the athlete's training ability, enthusiasm and perseverance c) Program results report, documentation of achievement results

Procedures

The research procedure began with determining the location and subjects of the study at the SLB, followed by developing instruments based on the CIPP evaluation model. Data collection was conducted through observations of volleyball learning activities and practices, interviews with teachers and relevant parties, and documentation of the school program. The data obtained were then analyzed qualitatively using source and method triangulation techniques to enhance the validity of the findings. The results of the analysis are then presented descriptively to illustrate the program's context, inputs, processes, and product.

Data Analysis

Data analysis in this study uses data analysis according to Miles and Huberman, which states that qualitative data analysis activities are carried out interactively and continuously until completion, until the data is saturated. Data analysis in this study used the Miles and Huberman interactive model, which includes three stages data reduction, data presentation, and conclusions and verification. Data were obtained through observation, interviews, and documentation as a form of source triangulation to increase the validity of the research findings.

1. Data reduction, selection, and focusing of data relevant to the CIPP evaluation components: context, input, process, and product. Interviews with physical education teachers, principals, and students were screened to identify program objectives, infrastructure readiness, learning strategies, and student volleyball achievement. Data irrelevant to the research focus was removed to obtain more focused and meaningful information.
2. Data presentation, This presentation makes it easier for researchers to see the relationship between program planning, learning implementation, and the outcomes achieved by students with speech disability. The data presentation shows that the program has been designed to meet student needs, but there are still limitations in terms of facilities and variety of training methods.
3. Conclusion, The temporary conclusions obtained are then reviewed by comparing the results of observations, interviews and documentation.

RESULT

The results of this study are based on the CIPP evaluation model, which encompasses context, input, process, and product in developing volleyball performance for students with special needs at.

Context Evaluation Results

Results of the context evaluation indicate that the volleyball training program at Special Needs School has clear objectives developing motor skills, social skills, and self-confidence, as well as preparing students for competitions such as the National Sports Week O2SN. School policy supports adapted sports activities as part of developing the potential of students with speech and language disorders. This is evident in the absence of physical education PJOK lessons and the regular implementation of extracurricular volleyball activities. However, program planning is not fully based on an analysis of individual student needs. The general training program still follows a curriculum with limited modifications, so it has not fully adapted to the characteristics of students with speech and language disorders, particularly in terms of understanding instructions, concentration, and learning speed. Consequently, training objectives have not been formulated specifically and measurably for each student.

Input Evaluation Results

From an input perspective, research findings indicate that volleyball facilities and infrastructure in schools are still limited. The equipment used is largely standard and has not been fully modified to meet the needs of students with speech and language disorders. Visual learning media, which are crucial for students with communication difficulties, are also minimally utilized in training. In terms of human resources, physical education PJOK teachers possess basic competencies in teaching sports, but not all have received specific training related to adaptive physical education and achievement training for students with special needs. This results in limited variety of training methods and communication strategies used during the learning and training process. Furthermore, parental support for training activities is generally good, particularly in terms of granting permission and motivating students. However, parental involvement in monitoring training progress remains suboptimal due to the lack of a structured student progress reporting system.

Process Evaluation Results

Volleyball lessons and practices at Special Needs School are routinely conducted during physical education PJOK classes. The most frequently used methods are movement drills, repetitive exercises, and simple games aimed at increasing student interest and participation. Students demonstrate considerable enthusiasm and willingness to participate in training activities. However, performance development has not been implemented systematically and sustainably. Additional training schedules for competition preparation are unstructured, and there is no long-term training program designed to be implemented gradually according to students' ability levels. Student assessment skills are still observational and do not use standardized assessment instruments, making it difficult to objectively monitor student progress over time. Barriers frequently encountered in the training process include limited practice time, differences in student ability levels, and difficulties in communicating complex instructions. These conditions require teachers to frequently review materials and adjust the pace of practice to ensure all students can participate.

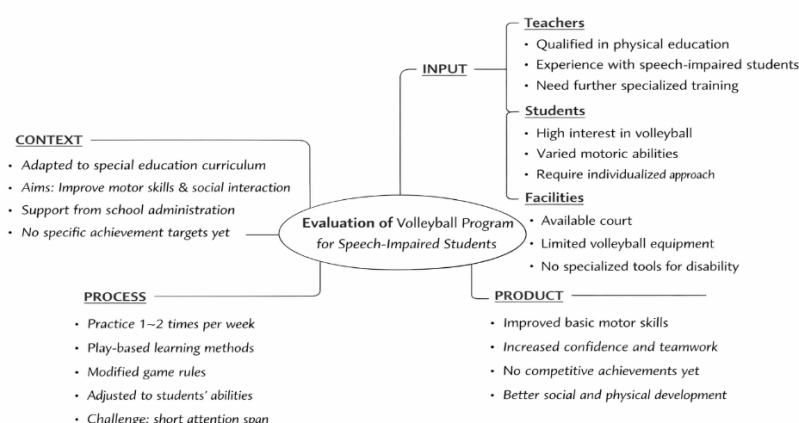
Product Evaluation Results

Product evaluation results showed improvements in basic motor skills, movement coordination, performance confidence, and teamwork among the majority of students. Furthermore, students also demonstrated increased confidence in participating in sports and

achieving success in school activities. However, in terms of competitive performance, results are still limited and have not shown significant and consistent improvement. Achievements are more participatory than competitive rankings. This indicates that the goal of developing sports performance has not been fully achieved.

DISCUSSION

This mind map presents a summary of research results obtained through data triangulation techniques, namely interviews, observations, and documentation, in broadcasting volleyball sports achievement training for deaf students in Special Needs School. The data mapping is arranged based on the CIPP evaluation model (Context, Input, Process, Product) to provide a comprehensive picture of program suitability, resource readiness, activity implementation, and achieved results. Through the presentation in the form of a mind map, it is hoped that the relationship between findings can be understood more concisely, systematically, and easily analyzed as a basis for drawing research conclusions.



Source: Interview, Documentation & Observation Study, 2024

Figure 1. Volleyball Training Evaluation for Speech Disorders

Analysis

The results of data analysis through triangulation of interviews, observations, and documentation analyzed using the Miles and Huberman model show that the volleyball achievement development program for students with intellectual disabilities at Special Needs School has been running in accordance with the program objectives context and is supported by teacher competence input. However, limited infrastructure and suboptimal training intensity continue to hamper program implementation process. Consequently, despite improvements in

basic skills and student participation, competitive outcomes product remain suboptimal. These findings suggest that program success is primarily driven by the learning process, while input and product aspects still need to be strengthened.

Contributions to future research: 1) could include developing and testing a more structured and intensive adaptive volleyball training model to improve the technical skills of students with speech and language disorders; 2) Further research can expand the scope of the research to several Special Needs School to compare the effectiveness of achievement development programs between schools; 3) Examining the role of parental support and school policies in the desire to achieve sports achievement through training programs at Special Needs School.

CONCLUSION

Based on the research results using the CIPP evaluation model and data triangulation techniques through interviews, observation, and documentation, it can be concluded that the volleyball achievement development program for students with special needs at the Special Needs School has been running quite well and is relevant to the students' needs. From a contextual perspective, this program has clear goals, namely improving students' motor skills, social interaction, and self-confidence, and has received support from the school and parents. In terms of input, the availability of teachers, facilities, and school support is considered adequate, but there are still limitations in the quantity and quality of infrastructure and specific teacher training in adapted sports.

This impacts the optimization of student achievement training. In terms of process, learning and training are implemented using an intensive, in-depth, and individualized approach, but still face obstacles such as limited training time and differences in ability among student. In terms of outcomes products, this program had a positive impact on improving students' fundamental volleyball skills, courage, and social skills. However, competitive performance was suboptimal due to limited training intensity and a lack of a sustainable training program.

This research has several implications, namely: (1) the need to improve teacher competency through adaptive sports training so that learning strategies are more appropriate to the needs of students with speech and language disabilities; (2) schools need to add and modify sports facilities and infrastructure so that training can take place more effectively and safely;

(3) the need for more structured and sustainable training program planning to consistently improve basic technical skills; and (4) the need for collaboration with external parties, such as clubs or related institutions, to open up opportunities for competition and advanced training. These implications are expected to be the basis for program improvement and a reference for further research in the development of adaptive sports in special schools.

This research contributes to providing an empirical overview of the implementation of adaptive sports programs in special needs schools and can serve as a basis for schools to improve the quality of sports program planning, implementation, and evaluation. For future researchers, it is recommended to 1) develop a more structured and adaptive volleyball training model based on student ability levels; 2) examine the effect of specialized teacher training on improving student learning outcomes and achievement; 3) Expanding the scope of research to various levels and types of disabilities to obtain more comprehensive results.

ACKNOWLEDGMENT

The author would like to express his gratitude to the campus for the academic support and facilities provided during the research process. He would also like to thank the Special Needs School for the permission and opportunity to conduct this research, as well as to the principal, teachers, and students who have participated cooperatively in this research. Furthermore, he would like to express his gratitude to all parties who have helped, both directly and indirectly, whose names cannot be mentioned individually, for their support, cooperation, and contributions that have made this research possible.

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