



Improving personal and social skills through physical education learning based on PYD-TS model YES-S for students in inclusive schools

Mejora de las habilidades personales y sociales a través del aprendizaje de la educación física basado en el modelo PYD-TS YES-S para estudiantes en escuelas inclusivas

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Abstract

Introduction: Positive student development is an important aspect of education, particularly in diverse inclusive schools, where sport plays a potential interactive role in developing students' character, social skills and self-confidence.

Objective: The purpose of this study was to determine the effect of the Positive Youth Development Throught Sport (PYD-TS) Model YES-S on Students in Inclusive Schools.

Methodology: Quantitative research Quasi-Experiment Pretest-Posttest Control-Group Design using the Youth Experience Survey of Sport (YES-S) questionnaire instrument in the Personal Skills and Social Skills domains. The population and sample of this study were 217 ABK (children with special needs) and NonABK Non-ABK (non-children with special needs) students from SDN 30 and SMPN 13 Palembang.

Results: The results of the analysis showed that pure PE learning was only significant in the NonABK group ($p = 0.002$), while in the ABK group it was not significant ($p = 0.057$). On the other hand, the PYD-TS Model YES-S program had a significant effect on both the ABK group ($p = 0.000$) and NonABK ($p = 0.000$), with a higher t value, indicating a stronger impact than pure PE (Physical education) learning.

Conclusions: PE learning based on PYD-TS Model YES-S has proven effective in significantly improving personal skills and social skills in ABK and students, so that this model can be an inclusive and holistic approach in supporting the development of students in the school environment.

Keywords

Personal skill; social skill; physical education, PYD-TS YES-S, inclusive school.

Resumen

Introducción: El desarrollo positivo del alumnado es un aspecto importante de la educación, especialmente en escuelas inclusivas y diversas, donde el deporte desempeña un papel interactivo potencial en el desarrollo del carácter, las habilidades sociales y la autoconfianza del alumnado.

Objetivo: El propósito de este estudio fue determinar el efecto del Modelo de Desarrollo Positivo Juvenil a través del Deporte (PYD-TS) YES-S en el alumnado de escuelas inclusivas.

Metodología: Investigación cuantitativa con diseño cuasi-experimental pre-test-posttest y grupo control, utilizando el cuestionario Encuesta de Experiencia Juvenil en el Deporte (YES-S) en las áreas de Habilidades Personales y Habilidades Sociales. La población y la muestra de este estudio fueron 217 estudiantes ABK (niños con necesidades especiales) y No ABK (niños sin necesidades especiales) de SDN 30 y SMPN 13 Palembang.

Resultados: Los resultados del análisis mostraron que el aprendizaje de EF pura solo fue significativo en el grupo No ABK ($p = 0,002$), mientras que en el grupo ABK no fue significativo ($p = 0,057$). Por otro lado, el programa Modelo PYD-TS YES-S tuvo un efecto significativo tanto en el grupo ABK ($p = 0,000$) como en el No ABK ($p = 0,000$), con un valor t más alto, lo que indica un mayor impacto que el aprendizaje de EF pura (Educación Física).

Conclusiones: El aprendizaje de EF basado en el Modelo PYD-TS YES-S ha demostrado ser eficaz para mejorar significativamente las habilidades personales y sociales en el grupo ABK y el alumnado, lo que lo convierte en un enfoque inclusivo y holístico para apoyar el desarrollo del alumnado en el entorno escolar.

Palabras clave

Habilidad personal; habilidad social; educación física, PYD-TS YES-S, escuela inclusiva.

Introduction

The Sustainable Development Goals represent a bold global initiative aimed at promoting inclusive progress and development across all nations (Akanle et al., 2022). The United Nations General Assembly officially endorsed the SDGs Agenda, aiming to create a transformative plan focused on four key pillars: People, Planet, Prosperity, and Peace. This comprehensive agenda is structured around 17 main goals, each supported by specific targets and measurable indicators (Rieu-Clarke et al., 2022). Growing economic uncertainty has intensified the focus on achieving the Sustainable Development Goals (SDGs), drawing increased interest from scholars, industry professionals, and policymakers alike (Hieu & Hai, 2023). An important part of the effort to realize the goals (SDGs) is inclusion in physical education. Inclusive education, particularly in the context of physical education, plays a vital role in achieving the Sustainable Development Goals (SDGs). It emphasizes the importance of creating an environment where every student regardless of physical condition, gender, socio-economic status, or disability has fair and equal access to engage in physical activities and sports. This approach fosters equity and promotes full participation for all learners.

Physical Education (PE) is a required part of the curriculum in both primary and secondary education. However, making PE accessible and inclusive for all students presents significant challenges. Creating a supportive and welcoming atmosphere often called a Learning-Friendly and Inclusive Environment (LIRP) is key to enabling every student, no matter their background or abilities, to engage meaningfully and gain from physical education activities (Kemendikbudristek, 2021). The concept of adaptation in inclusive education requires schools and educational institutions to consider three key aspects during the adjustment process: the curriculum, teaching methods, and the overall learning environment or ecology (BSKAP, 2022). Adapting educational practices is vital to support the involvement of students with disabilities. Within a Learning-Friendly and Inclusive Environment (LIRP), all members of the school community teachers and students embrace a shared commitment to equitable education that values cultural diversity and everyday experiences, fostering respect for individual differences (Kemendikbudristek, 2021b). Thus, a form of key element is needed for youth development in Indonesia through PE.

Policies in the field of educational sports need to focus on raising the standards of physical education and sports initiatives, broadening access to extracurricular sports activities, and strengthening the administration of Education and Training Centers. Moreover, it is essential to develop more nationally accredited sports schools across different regions in Indonesia (Ma'mun, 2015). Thus, through the adaptation of physical education practices and support for sports policies in the education sector, it is hoped that this will result in better quality education.

The expansion of Special Education and Inclusive Education cannot be understood without understanding how the entire education system developed in western countries over the last 200 years as the state emerged and its relationship to the economy (Tomlinson, 2017). The history of inclusive education differs across the globe; in some developing nations, it is perceived as a concept introduced by more developed countries, while in affluent nations such as Australia, efforts to fully establish inclusive education systems are still ongoing (Graham, 2020). Inclusive education refers to the practice of supporting students with disabilities within regular classroom settings, rather than separating them from their peers (Lieberman, L. J., & Houston-Wilson, 2018). In its development, Inclusive Education is becoming increasingly popular, where students with disabilities and students who develop typically are taught in the same school and class (Sacks, 2019).

The main problem that has not been resolved to date is the availability of quality and accommodating learning services for diverse students (Ditjen GTK, 2020). The small number of schools highlights in Table 1 the need for teachers to improve their skills in managing all types of learning activities. Stigma at both institutional and personal levels remains a major barrier for children with special needs, which can be addressed through targeted teacher training to reduce unconscious biases (Röhm et al., 2022). Research involving 1,583 educators revealed that greater awareness and confidence in inclusive physical activity methods are linked to more effective practice. However, teachers at the kindergarten and elementary levels tend to be less accepting of inclusion, indicating a need for additional support and training in these stages (Gentile et al., 2023). A higher attitude in social desirability is due to low attention to the educational platform provided.



Innovative approaches are needed to promote sport as a development tool for people with disabilities (Pate et al., 2020). A study of 95 children playing in an inclusive playground showed that they engaged in significant physical activity, including walking and stepping, during unstructured play. The results indicate that inclusive playgrounds provide valuable physical and social benefits for both children with and without disabilities (Stevens et al., 2023). "A study examining physical activity and sedentary behavior in four-year-old children found no significant differences between those living in urban and rural areas. However, the research emphasizes the importance of developing targeted programs to encourage physical activity during early childhood in Indonesia (Suherman et al., 2020). Thus, to encourage sport as a positive instrument in realizing inclusive education requires a form of program that can promote physical activity.

Positive Youth Development (PYD) is a concept used in the creation of educational services. It is a strength-based approach that emphasizes the potential of all young people to experience healthy growth and development (Santos et al., 2022). The Positive Youth Development (PYD) framework offers valuable guidance for research, policymaking, and intervention programs that support young people in reaching their fullest potential, emphasizing emotional health and holistic well-being (Uka et al., 2022). PYD is an asset-based approach that emphasizes the importance of helping young people successfully transition into adulthood. It focuses on teaching essential life skills, such as leadership, perseverance, and resilience, to promote long-term mental well-being (Martins et al., 2021). PYD is a strengths-focused approach that promotes life skills, leadership, and resilience in youth to support their mental health and smooth transition to adulthood, encouraging both young people and communities to work together for a positive future (Sieng et al., 2018). Indonesia is the third-largest democracy globally. For a nation to truly uphold democratic values, it must provide quality, inclusive education to all of its citizens (Vijayavarathan-R, 2023). From the outset, the SDGs have aimed to advance inclusive development worldwide by emphasizing inclusive and quality education. Although governments frequently revise policies to assist individuals with disabilities, there remains an absence of broadly adaptable program platforms to effectively implement these changes.

Physical education in inclusive settings can improve both motor and social abilities, demonstrated by adaptive approaches such as the FutbolNet method. The Positive Youth Development (PYD) framework, which centers on five core elements Connection, Competence, Confidence, Character, and Caring underscores the importance of positive experiences and relationships for students' physical and social development. Despite this, there is limited research on the application of PYD within inclusive PE programs. Existing studies identify obstacles faced by children with disabilities in PE, influenced by factors like teacher expertise, attitudes, training, curriculum design, and changing perspectives on physical literacy.

Inclusive schools bring together students with and without special needs, offering personalized support to accommodate a variety of learning styles. Enhancing the personal and social growth of students with disabilities particularly through physical education requires addressing existing challenges by creating more inclusive curricula and instructional strategies. This study emphasizes the importance of exploring new methods, such as Positive Youth Development Through Sport (PYD-TS), which remains unexplored in inclusive education contexts.

The Youth Development Through Sport (PYD-TS) program in inclusive schools helps provide children with disabilities (PDBK) equal access to education, aligning with the 2030 SDGs aim to reduce educational inequality and promote safe, welcoming learning environments. In Palembang, inclusive education encourages interaction between PDBK and non-PDBK students, which supports the growth of empathy and social skills. While the government offers multiple educational pathways for PDBK, there is a lack of organized sports programs focused on enhancing personal and social abilities. This study examines how the PYD-TS approach affects students attending inclusive schools in Palembang.

Method

The methodology used in this research is the Quantitative Method with Quasi-Experiment Pretest-Posttest Control-Group Design (Hunziker & Blankenagel, 2021). Experimental research is characterized by researchers who organize interventions in the lives of individuals to assess their impact on them through formally organized interventions aimed at identifying cause-and-effect relationships based on



experimental procedures (Boniface, 2019). In experimental research, participants are divided into two groups: the Treatment group and the Control group. The Control group consists of participants who do not experience the independent variable, while the Treatment group includes those who are exposed to the independent variable at a specified level, with the goal of observing its effects (Creswell & Guetterman, 2019).

Participants

The participants in the study that was given the PYD-TS YES-S model was students with special needs (ABK) and normal students (Non ABK). The population and sample of this study were 217 students ABK and NonABK from SDN 30 and SMPN 13 Palembang. The following is a description of the population list and research samples in this study:

Table 1. List of Population and Research Samples

Level	No	Population		Sampel		
		School Name	Class	NonABK	ABK	Total
Elementary School	1	SD Negeri 30	Class 5 A Class 5 B Class 5 D	73	12	85
	2	SD Negeri 173				
	3	SD Negeri 118				
	4	SD Negeri 124				
	5	SD Negeri 220				
Junior High School	6	SMP Negeri 13	Class 7 Class 8 Class 9 Class 10	99	10	109
	7	SMP Negeri 29				
	8	SMP Negeri 14				

Procedure

The research instrument used a Likert scale-based questionnaire that measures PYDS indicators (competence, connection, character). The instrument was validated through validity and reliability tests (Tabel 2 and 3). The research was conducted in 14 meetings, with a duration of 1 meeting of 3 x 35 minutes in the odd semester of 2024-2025, the researcher was assisted by an inclusive education teacher. Data collection techniques were quantitative data. Quantitative data, questionnaires were given to students and teachers to measure the extent to which sports activities support the positive development of adolescents in inclusive schools. In carrying out the pretest and posttest, this study used testing based on the Youth Experiences Scale for Sport (YES-S) instrument. YES-S is a scale is a five-factor measure of PYD results specifically designed for the sports context based on 37 items that assess Into-Personal and Interpersonal development experiences based on 5 factors of learning experiences with measurements (Table 4).

Table 2. Validity Results

Pearson Correlation: R. Calculation > R. Table = Valid (N=60)				
No.	Domain	R. Counttt	R. Table	Decision
1	PS.1	0,975	0,254	Valid
2	PS.2	0,925	0,254	Valid
3	PS.3	0,585	0,254	Valid
4	PS.4	0,704	0,254	Valid
5	PS.5	0,939	0,254	Valid
6	PS.6	0,401	0,254	Valid
7	PS.7	0,842	0,254	Valid
8	SS.1	0,820	0,254	Valid
9	SS.2	0,897	0,254	Valid
10	SS.3	0,433	0,254	Valid
11	SS.4	0,839	0,254	Valid
12	SS.5	0,596	0,254	Valid
13	SS.6	0,612	0,254	Valid
14	SS.7	0,864	0,254	Valid

Table 3. Reliability Results

Reliability Statistics				
Cronbach's Alpha: 0,940/Reliable				
No.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
PS.1	3.568.333	104.627	.967	.932
PS.2	3.601.667	96.186	.911	.930
PS.3	3.576.667	109.979	.526	.941
PS.4	3.603.333	105.795	.652	.938
PS.5	3.603.333	96.541	.929	.929
PS.6	3.535.000	115.113	.332	.944
PS.7	3.583.333	97.328	.784	.935
SS.1	3.548.333	106.118	.795	.935
SS.2	3.580.000	99.247	.877	.931
SS.3	3.566.667	114.124	.380	.943
SS.4	3.611.667	98.884	.805	.933
SS.5	3.546.667	107.575	.518	.942
SS.6	3.565.000	109.384	.560	.940
SS.7	3.560.000	99.837	.831	.932

Notes: Cronbach's Alpha > 0,6 = Reliable

Table 4. YES-S Measurement Scale

Experience Factor	Scale Type	Item	Size
Personal Skills	Positif	7	Likert 1-4
Social Skills	Positif	7	Likert 1-4

Data analysis

For data analysis, this study utilized SPSS 21, performing descriptive tests and N-Gain calculations to assess improvements in personal and social skills. A normality test was conducted to examine data distribution, followed by a Paired Samples Test to evaluate the impact of the Positive Youth Development Through Sport (PYD-TS) model, based on the Youth Experience Survey of Sport (YES-S) instrument, on students in inclusive schools in Palembang.

Results

The results of this study describe the results of the analysis of the influence of Youth Development Through Sport (PYD-TS) Model the Youth Experience Survey of Sport (YES-S) for students in inclusive schools in Palembang. Which includes the results of descriptive statistics, N-Gain, normality, and Paired Samples Test.

Table 5. Description of Personal Skills and Social Skills Scores

Group	Level	Type	N	Personal Skills (Gain)		Social Skills (Gain)	
				SD	Mean	SD	Mean
Control	Elementary School	ABK	3	0.24	0.19	0.15	0.10
		Non ABK	22	0.10	0.27	0.11	0.27
	Junior High School	ABK	3	0.40	1.33	0.33	1.29
		Non ABK	33	0.23	1.30	0.24	1.28
Experiment	Elementary School	ABK	7	0.32	1.10	0.33	1.00
		Non ABK	41	0.27	1.32	0.36	1.18
	Junior High School	ABK	9	0.17	1.17	0.18	1.38
		Non ABK	99	0.19	1.40	0.18	1.45

Table 5 shows the increase in Personal Skills and Social Skills in students based on the Control (without intervention) and Experiment (with intervention) groups. This data is divided based on education level (elementary and junior high school) and student category (special needs and non-special needs). In the control group, the increase in Personal Skills and Social Skills tended to be lower compared to the experiment group. Non-special needs students in the Control group showed a higher increase in skills compared to special needs students at all levels of education.



Table 6. Personal Skills Domain Improvement

Domain Personal Skills	ABK				NonABK			
	Mean		N-Gain	Criteria	Mean		N-Gain	Criteria
	Pre-Test	Post-Test			Pre-Test	Post-Test		
Kelas Experiment								
PS. 1	1.94	3,75	0.88	High	2.23	3.71	0.84	High
PS. 2	2.88	3,88	0.89	High	2.47	3.88	0.92	High
PS. 3	2.31	3,81	0.89	High	2.69	3.66	0.74	High
PS. 4	2.19	3,69	0.83	High	2.24	3.64	0.79	High
PS. 5	1.94	3,75	0.88	High	2.16	3.67	0.82	High
PS. 6	2.25	3,69	0.82	High	2.25	3.76	0.86	High
PS. 7	2.44	3,75	0.84	High	2.39	3.77	0.86	High
Kelas Control								
PS. 1	1.69	2.06	0.29	Low	2.00	3.09	0.55	Low
PS. 2	2.31	2.63	0.27	Low	2.84	3.53	0.59	Low
PS. 3	2.13	2.56	0.27	Low	2.25	3.15	0.51	Low
PS. 4	2.00	2.44	0.29	Low	2.22	3.07	0.48	Low
PS. 5	2.19	2.56	0.27	Low	2.31	3.13	0.48	Low
PS. 6	1.88	2.63	0.41	Moderate	2.40	3.27	0.55	Low
PS. 7	1.81	2.44	0.27	Low	2.07	3.07	0.52	Low

Table 6 presents the experiment class that implemented the PYD-TS Model YES-S method showed a significant increase in all Personal Skills indicators for ABK and NonABK students, with most aspects being in the high category. On the other hand, the Control class that used the Pure Physical Education method showed a lower increase, with most aspects being in the low to moderate category.

Table 7. Increased of Domain Personal Skills

Table 7. Increased of Domain Personal Skills								
Domain Social Skills	ABK				NonABK			
	Mean		N-Gain	Criteria	Mean		N-Gain	Criteria
	Pre-Test	Post-Test			Pre-Test	Post-Test		
Experiment								
SS.1	2,19	3,63	0,79	High	2,56	3,88	0,92	High
SS.2	2,94	3,69	0,71	High	2,39	3,66	0,79	High
SS.3	2,00	3,75	0,88	High	2,23	3,64	0,79	High
SS.4	2,13	3,88	0,93	High	2,35	3,67	0,80	High
SS.5	2,19	3,69	0,83	High	2,54	3,76	0,83	High
SS.6	2,44	3,75	0,84	High	2,26	3,77	0,87	High
SS.7	2,19	3,88	0,93	High	2,20	3,74	0,86	High
Control								
SS.1	2,13	2,50	0,25	Low	2,75	3,53	0,62	Moderate
SS.2	1,94	2,38	0,23	Low	2,18	3,15	0,53	Moderate
SS.3	1,81	2,38	0,40	Moderate	2,09	3,07	0,51	Moderate
SS.4	2,44	2,69	0,23	Low	2,80	3,13	0,27	Low
SS.5	2,00	2,31	0,23	Low	2,25	3,27	0,58	Moderate
SS.6	1,94	2,31	0,33	Moderate	2,16	3,07	0,50	Moderate
SS.7	1,56	2,13	0,25	Low	1,85	3,44	0,74	High

Table 7 show that the PYD-TS Model, based on the YES-S framework, proved more effective in improving social skills among both ABK and Non-ABK students in the Experiment group, with most aspects showing significant improvements. On the other hand, the traditional approach used in the Control group produced lower results, with most areas in the low to moderate range. Therefore, this program is recommended for broader implementation to support the optimal development of students' social skills. To further validate these results, a normality test was conducted, followed by a Paired Samples Test.

Table 8. Results of the Output of the Normality Test for the Four Research Groups

No	Group	Variabel	Nilai sig.	
			Pre-Test	Post-Test
1	Pure PE Learning for ABK	Personal skills dan Social Skills	.750	.100
2	Pure PE Learning Non-ABK		.200	.136
3	PYD-TS Model YES-S ABK Program		.871	.750
4	PYD-TS Model YES-S NonABK Program		.200	.187

Based on Table 9, the significance values for both ABK (students with special needs) and non-ABK groups in the Pure PE Learning and PYD-TS Model YES-S programs are all above 0.05, indicating that

the data follows a normal distribution. This normality applies to both the Personal Skills and Social Skills variables. To evaluate progress in these areas, a paired sample t-test is conducted across different student groups including those in Pure PE, the PYD-TS Model YES-S, and similar initiatives to identify whether there are meaningful differences in skill development resulting from each intervention.

Table 9. Paired Samples Test Output Results for the Four Research Groups

No	Model	t	df	Sig. (2-tailed)
1	Pure PE Learning for ABK	4.000	2	.057
2	Pure PE Learning Non-ABK	5.359	6	.002
3	PYD-TS Model YES-S ABK Program	55.000	2	.000
4	PYD-TS Model YES-S NonABK Program	16.253	6	.000

Based on the Paired Samples Test in Table 8, Pure PE learning was found to significantly improve Personal and Social Skills in Non-ABK students, but showed no statistically significant effect for ABK students. On the other hand, the PYD-TS Model YES-S program led to notable improvements in both student groups. The program demonstrated a greater impact than Pure PE, particularly for ABK students. In conclusion, the PYD-TS Model YES-S approach proved to be more effective in enhancing the Personal and Social Skills of all students involved.

Discussion

The results of the study showed that the PYD-TS Model YES-S program was superior to pure PE learning in improving the development of students' personal skills and social skills, both in the ABK and Non-ABK groups. The results obtained were due to the PYD-TS Model YES-S program provided. The Positive Youth Development Through Sport (PYD-TS) approach emphasizes positive experiences, strengthening interpersonal relationships, and creating an environment that supports the growth of all participants (Camiré et al., 2011; Holt et al., 2017; Juhrodin et al., 2023). This model focuses on developing individual strengths, not weaknesses, so that both ABK and Non-ABK students can feel valued and have a role in every activity carried out. With activities that are designed to be fun, challenging, and collaborative, students can develop their potential optimally, regardless of their special needs background. This program provides space for students to learn through direct experiences, such as teamwork, problem solving, and decision making in an inclusive sports context (Andriani et al., 2024)). Students with special needs, who often experience obstacles in social interaction and involvement in school activities, get equal opportunities to show their abilities, increase their self-confidence, and feel part of a community. Meanwhile, non-special needs students also benefit from this interaction, such as growing empathy, tolerance, and the ability to adapt to a diverse environment.

In addition, activities in the PYD-TS program are designed not only to improve physical skills, but also to internalize positive values such as sportsmanship, responsibility, leadership, and perseverance (Rismayadi et al., 2020). This is in accordance with the basic principles in adolescent development that emphasize the importance of character building through meaningful activities. With this approach, students not only experience development in personal and social aspects, but also grow into more reflective and goal-oriented individuals.

Structured activities guided by competent educators are also important factors in the success of the program. The role of teachers as facilitators is very important in creating an inclusive atmosphere and encouraging active participation from all students. With the support of a conducive environment and open communication, this program is able to build mutual respect among students and create a positive and sustainable learning climate. This study provides novelty in the application of the PYD-TS YES-S Model in the context of Inclusive schools, different from previous studies that focused more on athletes or non-formal programs. The success of physical education learning is influenced by several factors, one of the most important of which is the competence of teachers in providing instructions and evaluating student progress (Destriana et al., 2021). An intentionally designed learning process in Physical Education and the PYD-TS model supports inclusive education by creating an environment where all students, including those with special needs, feel valued and have equal chances to thrive. This supportive atmosphere encourages the ongoing growth of essential Personal and Social Skills, such as exchanging feed-

back, taking shared responsibility, collaborating effectively, practicing patience, developing relationships, and appreciating diversity—key factors in fostering meaningful and inclusive peer interactions. This emphasizes the creation of a supportive classroom atmosphere, as such an environment plays an important role in fostering a positive learning atmosphere that increases the effectiveness of the teaching and learning process (Shakir et al., 2017).

Other findings also note the importance of student engagement in activities that enable them to understand group dynamics and their emotional impact, thereby enhancing communication and empathy skills. This study confirms that the development of these skills can be optimized through a variety of physical education activities, both at elementary and secondary levels, with an approach that is tailored to needs. Learning objectives to be achieved include encouraging student engagement, addressing learning challenges by offering support such as tutoring, providing summaries, and focusing on the needs of each student (Fitri & Putra, 2022). This study underscores that successful inclusive education depends not just on adaptable curricula but also on cultivating an environment that fosters meaningful social interaction, effective communication, and active participation among all students. Physical activity programs at both elementary and secondary levels contribute to building teamwork, leadership, and communication skills. Furthermore, the involvement of families through collaborative events such as parent-inclusive sports and school-wide activities is particularly important for students with special needs, as parents bring essential understanding of their child's unique challenges and strengths (Jigyel et al., 2019). Interaction in sports activities has also been shown to help students recognize and accept individual differences, which is key to building harmonious social relationships in inclusive schools. This study was limited to inclusive schools within the Palembang region, so the findings may not be applicable to inclusive schools in other regions with different social, cultural, or educational contexts.

Conclusions

It can be concluded that PE learning based on PYD-TS Model YES-S has proven effective in improving Personal Skills, Social Skills in ABK and Non-ABK students. These results indicate that the PE learning model based on PYD-TS Model YES-S can be a strategic alternative in creating inclusive and effective learning, both for ABK and Non-ABK students. This approach can strengthen students' personal and social abilities as a whole in the context of PE. Further research can be conducted by involving more schools from various levels and regions to see the consistency of the effectiveness of this model in different contexts. Further studies should use a mixed methods approach to explore not only how much improvement occurs quantitatively, but also how the process of change occurs from the perspective of students, teachers, and parents.

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References

- Akanle, O., Kayode, D., & Abolade, I. (2022). Sustainable development goals (SDGs) and remittances in Africa. *Cogent Social Sciences*, 8(1). <https://doi.org/10.1080/23311886.2022.2037811>
- Andriani, R. F., Risyanto, A., Rudiana, R. D. P., Rudiana, P., & Haris, I. N. (2024). Pengaruh Model Pembelajaran Sport Education Model (SEM) Terhadap Peningkatan Positive Youth Development (PYD) Siswa Kelas VIII di SMPN 2 Subang. *Biomatika: Jurnal Ilmiah Fakultas Keguruan Dan Ilmu Pendidikan*, 10(2), 146–154. <https://doi.org/10.35569/biormatika.v10i2.2009>
- Boniface, D. R. (2019). *Experiment Design and Statistical Methods for Behavioral and Social Research*. In Taylor & Francis Group. CRC Press. <https://doi.org/10.2307/2684213>
- BSKAP. (2022). *Panduan Pelaksanaan Pendidikan Inklusif*. In Badan Standar, Kurikulum, dan Asesmen Pendidikan. Kemendikbudristek.
- Camiré, M., Forneris, T., Trudel, P., & Bernard, D. (2011). Strategies for helping coaches facilitate positive youth development through sport. *Journal of Sport Psychology in Action*, 2(2), 92–99. <https://doi.org/10.1080/21520704.2011.584246>
- Creswell, J. W., & Guetterman, T. C. (2019). *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. In Pearson. Pearson Education, Inc.
- Dirstatat. Kesra. (2022). *Statistik Penduduk Lanjut Usia 2022*. Badan Pusat Statistik.
- Fitri, A. H., & Putra, L. F. (2022). Development of Physical Education Textbook Based on Direct Instructions for Children with Special Needs. *Halaman Olahraga Nusantara (Jurnal Ilmu Keolahragaan)*, 5(2), 424. <https://doi.org/10.31851/hon.v5i2.7388>
- Gentile, A., Giustino, V., Rodriguez-Ferrán, O., La Marca, A., Compagno, G., Bianco, A., Battaglia, G., & Alesi, M. (2023). Inclusive physical activity games at school: The role of teachers' attitude toward inclusion. *Frontiers in Psychology*, 14(March), 1–8. <https://doi.org/10.3389/fpsyg.2023.1158082>
- Graham, L. J. (2020). Inclusive education in the 21st century. In *Inclusive Education for the 21st Century* (pp. 3–26). Routledge. <https://doi.org/10.4324/9781003116073-2>
- Hieu, V. M., & Hai, N. T. (2023). The role of environmental, social, and governance responsibilities and economic development on achieving the SDGs: evidence from BRICS countries. *Economic Research-Ekonomika Istrazivanja*, 36(1), 1338–1360. <https://doi.org/10.1080/1331677X.2022.2086598>
- Holt, N. L., Neely, K. C., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., Macdonald, D., Strachan, L., & Tamminen, K. A. (2017). A grounded theory of positive youth development through sport based on results from a qualitative meta-study. *International Review of Sport and Exercise Psychology*, 10(1), 1–49. <https://doi.org/10.1080/1750984X.2016.1180704>
- Hunziker, S., & Blankenagel, M. (2021). *Research Design in Business and Management*. Springer Nature. <https://doi.org/10.1007/978-3-658-34357-6>
- Jigyel, K., Miller, J. A., Mavropoulou, S., & Berman, J. (2019). Parental Involvement in Supporting Their Children with Special Educational Needs at School and Home in Bhutan. *Australasian Journal of Special and Inclusive Education*, 43(1), 54–68. <https://doi.org/10.1017/jsi.2019.3>
- Juhrodin, J., Munajat Saputra, Y., Ma'mun, A., & Yudiana, Y. (2023). The integration of the universal values of sport into physical education: Positive Youth Development (PYD) framework. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 9(2), 260–273. https://doi.org/10.29407/js_unpgri.v9i2.19859
- Kemendikbudristek. (2021a). *Tulkit LIRP Merangkul Perbedaan: Perangkat untuk Mengembangkan Lingkungan Inklusif Ramah terhadap Pembelajaran*. In Kemendikbudristek (4th ed.). IDPN Indonesia.
- Kemendikbudristek. (2021b). *Tulkit LIRP Merangkul Perbedaan: Perangkat untuk Mengembangkan Lingkungan Inklusif Ramah terhadap Pembelajaran*. In Kemendikbudristek (4th ed.). IDPN Indonesia.
- Lieberman, L. J., & Houston-Wilson, C. (2018). *Strategies for Inclusion Physical Education for Everyone*. In Human Kinetics (Vol. 3). Human Kinetics.
- Ma'mun, A. (2015). *Development of the Educational Sport in Indonesia : The Policy Study Based on the Law of National Sports System*. *Jurnal Kajian Pendidikan*.

- Martins, A. R., Vella, S., & Santos, F. (2021). Mental Health, Sport, and Positive Youth Development in Prison Systems: How Can We Move Research and Practice Forward? *Frontiers in Psychology*, 12(March), 1–5. <https://doi.org/10.3389/fpsyg.2021.598766>
- Pate, J. R., Sheadler, T., Spellings, C., Malnati, A., & Hillyer, S. (2020). Sport as a tool for community leaders of people with disabilities: exploring an innovative, immersive exchange training program. *Managing Sport and Leisure*, 25(3), 146–160. <https://doi.org/10.1080/23750472.2019.1653219>
- Rieu-Clarke, A. S., Bernardini, F., Tiefenauer-Linardon, S., & Aureli, A. (2022). Advances in monitoring transboundary water cooperation? Reflecting on the development and implementation of SDG indicator 6.5.2. *Water International*, 47(3), 438–457. <https://doi.org/10.1080/02508060.2022.2025556>
- Rismayadi, A., Subarjah, H., Yudiana, Y., & Rusdiana, A. (2020). Olympism and Positive Youth Development (PYD): A New Goal in The Extension of Youth Sports Development for Basketball in Indonesia. *Jurnal Pendidikan Jasmani Dan Olahraga*, 5(2). <https://doi.org/10.17509/jpjo.v5i2.26743>
- Röhm, A., Grengel, M., Möhring, M., Zensen-Möhring, J., Nellen, C., & Hastall, M. R. (2022). Applying the mixed-blessings model and labeling theory to stigma in inclusive education: An experimental study of student and trainee teachers' perceptions of pupils with ADHD, DLD, and intellectual disability. *Frontiers in Psychology*, 13(October), 1–14. <https://doi.org/10.3389/fpsyg.2022.910702>
- Sacks, L. (2019). The school-to-prison pipeline: The plight of African American males in special education. In *Inclusion, Equity and Access for Individuals with Disabilities: Insights from Educators across World* (pp. 67–87). Springer Nature Singapore. https://doi.org/10.1007/978-981-13-5962-0_4
- Santos, F., Newman, T. J., Aytur, S., & Farias, C. (2022). Aligning Physical Literacy With Critical Positive Youth Development and Student-Centered Pedagogy: Implications for Today's Youth. *Frontiers in Sports and Active Living*, 4(April). <https://doi.org/10.3389/fspor.2022.845827>
- Shakir, M., Sharma, S., Professor, A., & Scholar, R. (2017). Using Educational Psychology for Better Teaching-Learning Environment. *Sonal Sharma International Journal of Education*, 8(63022), 2347–4343.
- Sieng, M., Cloutier, S., & Irimata, K. (2018). Positive Youth Development Sustainability Scale (PYDSS): The development of an assessment tool. *Journal of Social Change*, 10(1), 81–97. <https://doi.org/10.5590/josc.2018.10.1.07>
- Stevens, W. R., Borchard, J. M., Sleeper, P., Dempsey, D., Jeans, K. A., Jo, C. H., & Tulchin-Francis, K. (2023). Inclusive community playgrounds benefit typically developing children: An objective analysis of physical activity. *Frontiers in Sports and Active Living*, 4(February), 1–8. <https://doi.org/10.3389/fspor.2022.1100574>
- Suherman, A., Jajat, Rahayu, N. I., Sultoni, K., Risma, R., & Agust, K. (2020). Early Childhood Physical Activity and Sedentary Behavior in Indonesia : Advance in Health Sciences Research, 21(Icshpe 2019), 426–428.
- Tomlinson, S. (2017). A sociology of special and inclusive education: Exploring the manufacture of inability. *A Sociology of Special and Inclusive Education: Exploring the Manufacture of Inability*, 1–182. <https://doi.org/10.4324/9781315646237>
- Uka, F., Gashi, S., Gashi, A., Gllogu, D., Musliu, A., Krasniqi, A., Statovci, A., Sopjani, V., Perçuku, V., Sadikovic, I., & Wiium, N. (2022). The effectiveness of internal cohesion psychotherapy in treating young clients with depression and anxiety disorders: The role of developmental assets in Kosovo context. *Frontiers in Psychology*, 13(October), 1–11. <https://doi.org/10.3389/fpsyg.2022.1005709>
- Vijayarathan-R, K. (2023). Policy Equity Contexts in Inclusive Education for Immigrant Children in the Faroe Islands. In *Springer Polar Sciences* (pp. 79–96). Springer. https://doi.org/10.1007/978-3-030-97460-2_6



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