

**Improving Physical Competence of Elementary School Students through
Traditional Game-Based Physical Activities**

Sahabuddin^{1*}, Muhammad Ishak², Rahyuddin³, Tri Angriawan⁴

¹²³⁴Sports Coaching Education Study Program, Faculty of Sports and Health
Sciences, Makassar State University

sahabuddin@unm.ac.id, muh.ishak@unm.ac.id, rahyuddin@unm.ac.id,
tri.angriawan@unm.ac.id

*Corresponding Author: sahabuddin@unm.ac.id

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Abstrak

Kegiatan pengabdian ini bertujuan untuk meningkatkan kompetensi fisik siswa melalui pendekatan aktivitas jasmani berbasis permainan tradisional. Sasaran kegiatan adalah siswa kelas IV dan V SD Negeri 4 Mangkura Kota Makassar sebanyak 60 orang. Kegiatan dilaksanakan dalam tiga tahap: pra-kegiatan (koordinasi dan asesmen kebutuhan), pelaksanaan (pelatihan guru, penyuluhan orang tua, dan praktik permainan), serta pasca-kegiatan (evaluasi dan diseminasi). Lima aspek kompetensi fisik yang diukur meliputi daya tahan, kelincahan, keseimbangan, kekuatan otot tungkai, dan koordinasi gerak. Hasil pengukuran menunjukkan peningkatan signifikan pada seluruh aspek, dengan skor rata-rata pra-kegiatan antara 58-65 meningkat menjadi 72-80 setelah program dilaksanakan. Secara kualitatif, terjadi peningkatan partisipasi aktif siswa, perubahan perilaku ke arah lebih disiplin dan kooperatif, serta meningkatnya kesadaran guru dan orang tua terhadap pentingnya aktivitas jasmani berbasis budaya lokal. Program ini juga berhasil menghidupkan kembali minat terhadap permainan tradisional di lingkungan sekolah. Pengabdian ini membuktikan bahwa model pembelajaran PJOK yang mengintegrasikan nilai budaya lokal melalui permainan tradisional mampu meningkatkan kompetensi fisik sekaligus membangun karakter siswa. Kegiatan ini direkomendasikan untuk diperluas ke sekolah lain sebagai bagian dari penguatan pendidikan karakter dan pelestarian budaya.

Kata Kunci: Permainan Tradisional, Kompetensi Fisik, Aktivitas Jasmani, Pendidikan Dasar.

Abstract

This community service activity aims to improve students' physical competence through a traditional game-based physical activity approach. The target of the activity is 60 students in grades IV and V of SD Negeri 4 Mangkura, Makassar City. The activity is carried out in three stages: pre-activity (coordination and needs assessment), implementation (teacher training, parent counseling, and game practice), and post-activity (evaluation and dissemination). The five aspects of

physical competence measured include endurance, agility, balance, leg muscle strength, and motor coordination. The measurement results showed a significant increase in all aspects, with an average pre-activity score of 58–65 increasing to 72–80 after the program was implemented. Qualitatively, there was an increase in active student participation, changes in behavior towards being more disciplined and cooperative, and increased awareness of teachers and parents regarding the importance of local culture-based physical activity. This program also succeeded in reviving interest in traditional games in the school environment. This community service proves that the PJOK learning model that integrates local cultural values through traditional games is able to improve physical competence while building student character. This activity is recommended to be expanded to other schools as part of strengthening character education and preserving culture.

Keywords: Traditional Games, Physical Competence, Physical Activity, Elementary Education.

INTRODUCTION

Physical education (Penjas) at the elementary school level has a strategic role in forming the foundation of children's physical, motor, and character development. At elementary school age, children are in the golden age of motor development which is very vulnerable to the influence of a sedentary lifestyle and a lack of structured and enjoyable physical activity. The reality in the field, especially at SD Negeri 4 Mankura, Makassar City, shows that the physical activities carried out still tend to be monotonous, less contextual, and have minimal variation that integrates elements of local culture and games that are relevant to the children's world.

As a result, students' motivation to actively engage in physical activity becomes low, which has a direct impact on stagnation or even deterioration of physical competencies such as endurance, agility, balance, and muscle strength. These findings are in line with the research of Rahmawati et al. (2020) which stated that a decrease in physical activity in elementary school children is the main cause of low levels of physical fitness and basic motor development disorders.

On the other hand, Indonesia has cultural richness in the form of traditional games that have the potential to be used as an effective and fun Penjas learning medium. Games such as "engklek," "galasin," "hide and seek," and "fortresses" are not only fun, but also contain basic elements of movement such as jumping, running, catching, and throwing which are important in the development of students' motor skills (Susanto, 2018). Unfortunately, these games are starting to be eroded by the dominance of digital technology-based games that are passive and individualistic.

Therefore, the integration of traditional games in learning physical activities in elementary schools needs to be pursued in a systematic, planned, and scientific-based manner in order to be able to improve physical competence while

preserving the nation's cultural values. This service program is important as an answer to these challenges, especially to answer the real needs at SD Negeri 4 Mangkura Makassar City.

The urgency of this service is based on the urgent need to overcome the decline in student participation in physical activities and the increase in sedentary lifestyles among elementary school-age children. Survei Dinas Makassar City Health (2022) shows that more than 45% of elementary school students in urban areas are mildly to moderately overweight, and only 30% participate in regular physical activity outside of school hours.

This situation not only threatens aspects of physical fitness, but also impacts the child's cognitive and social development, as explained by Tomporowski et al. (2015), who affirm a strong link between pleasurable physical activity and improved academic performance and students' social interactions.

The significance of this service program is to provide an innovative approach to Penjas learning through the use of traditional games as a medium to strengthen students' physical competence. With this approach, physical learning is no longer purely instructional, but becomes an exploratory vehicle that is fun, competitive, and full of local values. On the other hand, Penjas teachers in target schools will also get increased competence in packaging culture-based physical activities.

The main objectives of this community service activity are as follows:

1. Improving the physical competence of SD Negeri 4 Mangkura students through physical activities based on traditional games.
2. Re-foster students' interest in physical activities through a fun approach that is appropriate to the child's age characteristics.
3. Provide training to Penjas teachers to be able to design and implement physical learning models based on traditional games in a systematic manner.
4. Educate the school community (parents and school committees) about the importance of preserving traditional games as part of strengthening the nation's character and cultural identity.

Research on the effectiveness of traditional games in improving aspects of children's physical fitness has been widely conducted both at the national and international levels. According to Hidayat et al. (2021), the application of traditional games in physical activities is able to significantly improve gross motor aspects, muscle endurance, and movement coordination of students compared to conventional learning methods.

Studies by Purwandari and Hadi (2019) also show that games such as "gobak sodor" and "traditional relay running" provide more varied and adaptive motor stimuli to early childhood characteristics. Furthermore, the results of a meta-analysis by Gallotta et al. (2022) from the journal *Frontiers in Pediatrics* show that traditional games played in a structured manner have a positive impact on the psychomotor and social-emotional development of elementary school students.

Thus, the integration of traditional games in physical learning is not only an innovative pedagogic approach, but also a form of recontextualization of cultural values in contemporary education.

METHOD OF IMPLEMENTATION OF ACTIVITIES

This service activity is carried out in the form of: (1) Training for Physical Education teachers and homeroom teachers related to the implementation of traditional games in learning physical activities, (2) Counseling to students about the benefits of physical activities based on traditional games in improving physical fitness and building character, and (3) Mini seminars as a forum for reflection and dissemination of the results of activities to the school.

The main activity partners are: (1) Grade IV and V students of SD Negeri 4 Mangkura totaling 60 people, consisting of 30 male students and 30 female students, aged 9-11 years. They are the main subjects in the application of traditional game-based physical activities. And (2) PJOK teachers and homeroom teachers as many as 6 people, who are involved in training and observation of program implementation.

This participatory approach in involving all elements of the school refers to the collaborative model as revealed by Rifai & Yusuf (2017), that inclusive educational partnerships have a more significant impact on the success of community-based school programs.

Table 1. Steps to implement service activities

Phase	Activities	Short Description
Pre-Activity	Coordination with the School	Initial audience with the principal and teachers of PJOK to explain the purpose of the program and establish cooperation in the implementation of activities.
	Survey and Need Identification	Pengumpulan data melalui kuesioner dan wawancara untuk mengetahui aktivitas jasmani siswa, jenis permainan yang dikenal, dan kendala yang dihadapi dalam pembelajaran PJOK.
	Penyusunan Modul Kegiatan	The preparation of traditional game-based learning modules is in accordance with the national curriculum (Ministry of Education and Culture, 2020) and the characteristics of elementary school students.
Implementation	Session 1 – Teacher Training	Training for PJOK teachers on traditional game concepts, basic motion mapping, and game implementation techniques in physical learning.
	Session 2 – Parent Counseling	Educate parents about the benefits of traditional games and how to encourage children to be active in physical activity at home.

Phase	Activities	Short Description
	Sessions 3-5 – Implementation of Physical Activity in the Classroom	Direct practice of 10 types of traditional games by students in PJOK learning, such as: engklek, galasin, fortengan, jumping rope, and toping.
		Each session lasted 90 minutes with the assistance of the service team and PJOK teachers.
	Session 6 – Mini Seminar and Dissemination	Presentation of results, reflection on activities, and discussions with schools and the community to evaluate and design the sustainability of the program.
Post-Activity	Thorough Evaluation	Assessment of the improvement of students' physical competence and changes in the teacher's approach in PJOK learning.
	Documentation and Reports	Preparation of final report of activities and documentation of traditional game-based learning videos.
	Advanced Program Recommendations	Drafting of a traditional game-based local curriculum for the development of long-term programs at partner schools.

Table 2. Methods of evaluation and monitoring of service activities

Method	Aspects Evaluated	Teknik dan Instrumen	Level Evaluasi (Kirkpatrick)
Direct Observation	Students' enthusiasm and participation while playing, Social interaction between students, Emergent motor movements	Participatory observation sheet based on indicators from Munastiwi & Abdullah (2021)	Level 1: Reaction Level 3: Behavior
Questionnaires and Questionnaires	Students' knowledge of traditional games, Perception of physical activities, Students' interests and motivations	Pre-post questionnaire using a Likert scale of 1-5, for students and teachers	Level 2: Learning

Structured Interviews	Teacher and parent perceptions of changes in student behavior, Implementation support and challenges at home/school	Structured interview guide, recorded and thematically analyzed	Level 3: Behavior
Evaluation of Physical Movement Practices	Students' basic physical competencies: endurance, strength, balance, and coordination	Child physical fitness test (20 m run, long jump without a start, one-legged stand, 30-second sit-up)	

IMPLEMENTATION OF ACTIVITIES AND DISCUSSIONS

The service program that has been implemented at SD Negeri 4 Mangkura has shown encouraging results both in terms of quantitative and qualitative. Based on the results of measurements on the five main aspects of physical competence (endurance, agility, balance, leg muscle strength, and movement coordination), a significant improvement was obtained.

For example, the average score for the balance aspect increased from 62 to 80, while agility increased from 60 to 75. All aspects of physical competence showed an average score increase of at least 10 points (see the Physical Competency Evaluation Results Table and the Student Physical Competency Improvement Graph).

On the qualitative side, the observation results showed an increase in student enthusiasm and participation when participating in physical activities. Students appear to be more active, dare to express themselves, and show more positive social interactions. PJOK teachers also noted an increase in the involvement of students who were previously passive or lacking confidence.

Table 3. Physical competency evaluation results

No.	Physical Aspects	Pre Grade Point Average	Post Grade Point Average
1	Durability	65	78
2	Agility	60	75
3	Balance	62	80
4	Leg Muscle Strength	58	72
5	Motion Coordination	64	79

The program not only increases students' physical capacity, but also results in positive behavior change. This can be seen from:

1. Active student participation: Students more often ask for time to play traditional games even outside of PJOK hours.

2. Discipline and cooperation: Games like "galasin" and "fortress" encourage teamwork and adherence to the rules of the game.
3. Independence and courage: Games like "knuckles" and "jump rope" help students overcome fear in movement and foster the courage to try.

This increase is in line with the findings of Sulaiman et al. (2021) who stated that traditional game-based physical activity can be an effective means in character and social-emotional formation of elementary school-age children.

Discussion and Comparison with Similar Literature

The results of this activity are in line with the literature that emphasizes the effectiveness of traditional game approaches in physical education.

1. Game-based learning models have been proven to increase student interest and participation (Widodo, 2020; Gallotta et al., 2022).
1. Traditional games improve gross motor skills and coordination better than conventional instructional approaches (Purwandari & Hadi, 2019; Rahmawati et al., 2020).
2. The use of local cultural contexts in physical activity reinforces the values of togetherness and social involvement (Susanto, 2018; Wahyuni & Nur, 2022).

Research by Gallotta et al. (2022) in *Frontiers in Pediatrics* shows that active involvement in traditional games improves social relationships and psychomotor development more thoroughly than modern physical activity based on tools or technology. Similarly, Astuti et al. (2022) emphasized the importance of community involvement in the development of physical education programs based on local culture, so that learning becomes contextual and sustainable.

In this context, the program implemented at SD Negeri 4 Mangkura not only plays a role as a physical intervention, but also as a medium for socio-cultural transformation in physical learning at the elementary school level.

CONCLUSION

This community service activity has been successfully carried out at SD Negeri 4 Mankura, Makassar City with a focus on improving the physical competence of elementary school students through a traditional game-based physical activity approach. The implementation of the program is carried out systematically in three stages: pre-activity (coordination and needs assessment), core implementation (teacher training, student counseling, and traditional game practices in the classroom), and post-activity (evaluation, documentation, and dissemination of results).

The results of the evaluation showed that there was a significant improvement in the physical competency aspects of students, especially in terms of endurance, agility, balance, leg muscle strength, and movement coordination. In addition, positive behavior changes are also evident from increased student participation, discipline in following the rules of the game, and social skills such as cooperation and mutual respect.

This program also succeeded in building positive collaboration between the service team, teachers, students, and parents. Teachers show increased

understanding and skills in composing and implementing physical learning based on traditional games. Students become more active, healthy, and enthusiastic in participating in physical activities. Parents are also beginning to be more aware of the importance of their role in supporting children's physical activities at home.

With an approach that combines educational values and local culture, this program not only provides a solution to the decline in students' physical competence due to low participation in physical activities, but also a real effort in preserving traditional games as the nation's cultural heritage. Games such as engklek, galasin, fort, jump rope, and gasing have been proven to be able to stimulate children's motor movements optimally while providing a fun learning experience.

Implications of Activities for the Community and Partners

This activity has a fairly wide impact, both directly and indirectly, on the community and school partners. Some of the key implications that can be concluded include:

1. For students: There is an increase in awareness of the importance of physical activity and lifestyle changes to be more active and healthy. Students become more comfortable moving, show initiative to play actively, and show enthusiasm in physical learning activities.
2. For teachers: This activity expands the horizons of PJOK teachers in implementing a learning model based on local culture. Teachers not only acquire technical skills, but also a philosophical understanding of the importance of bringing learning activities closer to the daily context of students.
3. For parents: The counseling provided has an impact on changing the mindset of parents, who previously emphasized more academic aspects. Now they are starting to encourage children to be active at home with more meaningful games than just passive digital games.
4. For schools: This program strengthens the synergy between schools and communities in carrying out holistic and enjoyable education. The principal and teachers showed enthusiasm to develop this module further to other grade levels.
5. For the general public: This activity revived interest in the ancient game that was almost extinct. In the long term, this can be a social movement to raise cultural awareness and a healthy lifestyle based on local wisdom.

Suggestion

Based on the results of the evaluation and reflection of all parties involved, there are several recommendations for the development of similar programs in the future:

1. Expansion of program scale: Similar programs should be developed to more elementary schools in Makassar City and other regions, both public and private, so that the benefits are broader and more equitable.
2. Development of traditional game-based thematic modules: There is a need for a more systematic preparation of modules for different grade levels, including

the integration of games with cross-subject learning themes such as Social Studies, Indonesian, and Mathematics.

3. Continuous training for teachers: It is necessary to organize regular training for PJOK teachers and homeroom teachers so that they are constantly updated with innovative learning strategies that are relevant to the characteristics of students and the times.
4. Community and related agency involvement: The Education Office, the Youth and Sports Office, and the local cultural community should be involved in follow-up programs to strengthen institutional support, resources, and implementation reach.
5. Digitization of traditional game documentation: For long-term preservation, documentation in the form of videos, digital books, or interactive applications needs to be developed to keep traditional games alive in the midst of the digital generation.
6. Long-term monitoring: It is necessary to conduct a long-term impact evaluation (3–6 months after the program) to measure the extent of the sustainability of changes in student competencies and behaviors.

Through this service program, it is proven that a contextual, fun, and local values-based approach to physical education can be a practical and strategic solution in building a generation of healthy, active, and culturally loving children. This program can be a model for other schools and become an important part of the character education development agenda in Indonesia.

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