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WORD COUNT 3454
TIME SUBMITTED 29-NOV-2025 01:21PM
PAPER ID 119222745

IJPESS
Indonesian Journal of Physical Education and Sport Science
p-ISSN 2775-765X | e-ISSN 2776-0200
Volume 5, No. 4, December 2025. Page. 485-492
http://journal.unucirebon.ac.id/index.php ijpess

The Contribution of the Traditional Game of Gobak Sodor to the Holistic Development of Students at Al-Jihadiah Religious Primary School

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Received: xx Month 2025, Approved: xx Month 2025, Published: xx Month 2025

Abstract

Study purpose. The application of the traditional game of Gobak Sodor in religious primary schools plays an important role as a holistic educational method, but its effectiveness in student development needs to be empirically proven.

Materials and methods. This study used a quantitative descriptive design to analyse the impact of this game on affective, cognitive, and psychomotor development. The research subjects involved 30 third-grade students at a religious primary school in Malaysia, selected using a saturated sampling technique (the entire population was used as the sample). Data were collected through direct observation using assessment instruments that had been tested for validity and reliability to ensure data accuracy.

Results. Descriptive analysis results showed that students achieved high scores in social attitude (Mean=3.10) and individual motor skills (Mean=2.70), but scores in thinking strategies and teamwork were still relatively low (Mean=2.20).

Conclusion. This study makes an important contribution to future studies by confirming that the development of higher-order thinking skills in traditional games does not occur automatically, but requires active instructional guidance from teachers (instructional scaffolding), rather than passive supervision.

Keywords: Gobak Sodor, Holistic Development, Physical Education, Social Skills, Traditional Games.

DOI: https://doi.org/10.52188/ijpess.v5i4.1582

Introduction

Traditional games are a cultural heritage rich in educational, social, and moral values that have been passed down from generation to generation (Suryawan, 2020) . Unlike modern digital games, which tend to be individualistic and encourage a sedentary lifestyle, traditional games inherently involve physical activity, direct social interaction, and teamwork (Protassova & Yelenevskaya, 2025). However, global phenomena show a significant shift in children's play patterns, with gadgets and digital technology dominating their leisure time. This shift correlates negatively with child development, characterised by a decline in motor activity, weakened

social skills, and increased individualism (Hijrianti et al., 2025). This condition underlines the urgency to revitalise traditional games as a relevant educational medium in the modern era.

In responding to the challenges of developmental degradation, a holistic approach in contemporary education has become increasingly crucial. Holistic education is defined as an effort to develop students' potential in a balanced and integrated manner, covering the affective, cognitive, and psychomotor domains (Syaukani et al., 2025). The relationship between this approach and school learning is fundamental; it shifts the educational paradigm from merely transferring academic knowledge to shaping well-rounded individuals. The importance of a holistic approach lies in its ability to prevent developmental imbalances, ensuring that students are not only intellectually intelligent, but also emotionally mature and physically agile (Miller, Nigh, Binder, Novak, & Crowell, 2019). Within this framework, multidimensional traditional games serve as natural catalysts for the implementation of holistic education because they simultaneously integrate physical movement, social dynamics, and cognitive challenges (Broom & Murphy, 2015).

One traditional game that represents this holistic education model is Gobak Sodor, also known as Galah Panjang in Malaysia. As part of the invasion games category, this game requires players to attack and defend territory (Permana, Lubay, & Mahendra, 2024). Scientific literature has confirmed the comprehensive contributions of this game: from a psychomotor perspective, it effectively improves gross motor skills and agility (Budiman, 2024) in the affective domain, it fosters communication and teamwork (Hasan, Husein, & Islam, 2024) and in the cognitive domain, it requires strategic thinking and tactical decision-making (Ali & Kurnaz, 2025).

Although the benefits of Gobak Sodor have been widely recognised, previous research has generally been limited to the context of cultural preservation or as a variation in physical education lessons in public schools. There is a crucial research gap regarding the integration of this game as a holistic educational tool in religious educational institutions. The novelty of this research lies in its specific context in Malaysian Religious Primary Schools (SRA). Unlike national schools, SRAs prioritise religious and moral education, but often lack a formal physical education curriculum. This absence risks creating an imbalance where cognitive and spiritual aspects are honed, while psychomotor and social strategy aspects are neglected. Therefore, the implementation of this research offers a strategic solution: to make traditional games, especially Gobak Sodor, not just recreational activities, but pedagogical interventions to balance the curriculum in SRAs. This study aims to: (1) describe the implementation of Gobak Sodor at SRA Rakyat Al-Jihadiah, (2) analyse its contribution to students' affective, cognitive, and psychomotor development, and (3) explore its potential as a holistic learning strategy based on local wisdom that is adaptive to modern educational needs.

Materials and Methods

Study participants

This study employed a quantitative descriptive design with field research techniques conducted at the Al-Jihadiah Religious Primary School (SRA) in Malaysia. Participants were determined through the application of total sampling (saturated sample), a methodological approach in which all members of the target population are directly designated as units of analysis without going through a random selection process. In the context of this study, the identified population included all 30 third-grade students with an average age of 9 years. The decision to designate 100% of the population as the sample was based on statistical considerations to eliminate sampling error and reduce the risk of selection bias that often arises in small-scale populations. By involving all students without exception, this study ensures an absolute level of data representativeness, so that the resulting affective, cognitive, and

psychomotor development profiles truly reflect the empirical conditions of the population comprehensively and accurately.

Study organization

The primary data sources in this study were collected through participatory observation of student activities in the Gobak Sodor game. A structured assessment instrument was developed to measure seven indicator variables classified into three main domains: (1) Affective Domain (social attitudes and discipline) (2) Cognitive Domain (knowledge of rules, understanding of strategies, and reasoning) and (3) Psychomotor Domain (motor skills and role execution/teamwork). Before being applied in the field, the integrity of the instrument was ensured through strict quality assurance procedures. The validity of the instrument was established through content validity based on expert judgement to ensure consistency between the observation indicators and the theoretical constructs of child development. Meanwhile, data reliability was strengthened through an inter-rater reliability mechanism between the authors and their supervisors to mitigate subjective bias and ensure consistency in assessment.

The data collection protocol was carried out systematically through three strategic stages. The preparation stage included institutional coordination and calibration of observer perceptions. The implementation stage applies an iterative game mechanism with a role rotation system; each student is observed in dual positions as “attacker” and “defender” so that their adaptability can be assessed in varying degrees of pressure in different situations. The final stage involves verifying the completeness of the observation sheet data (checklist) before proceeding to the data analysis process.

Statistical analysis

The data analysis process was conducted computationally using IBM SPSS Statistics Version 24 software to produce objective inferences. Descriptive statistical analysis was applied as the main method to map student competency profiles, utilising measures of data centralisation (mean) and dispersion (standard deviation) to identify performance trends and skill mastery variability in each domain. Furthermore, frequency distribution analysis was conducted to stratify student competency achievements into measurable performance clusters (Excellent, Good, Fair, and Needs Improvement). This series of analyses served to critically evaluate the effectiveness of the Gobak Sodor game as a holistic pedagogical instrument and validate its contribution to improving student development.

Results

This section presents research findings obtained from descriptive statistical analysis of observational data from 30 students. The data is presented objectively without interpretation to provide a clear picture of student performance in each domain of development measured.

Table 1. Descriptive Statistics (Affective, Cognitive, Psychomotor)

	N	Minimum	Maximum	Mean	SD
Social Attitude	30	2	4	3.10	.759
Discipline	30	1	3	2.33	.606
Game Knowledge	30	1	3	2.17	.648
Strategic Understanding	30	1	3	2.20	.484
Reasoning	30	1	3	2.23	.728
Motor Skills	30	2	4	2.70	.794
Role Execution	30	1	3	2.30	.702

The data in Table 1 shows differences in achievement between the domains measured. The highest average scores were achieved by students in the affective aspect - social attitudes (3.10) and the psychomotor aspect - motor skills (2.70). Conversely, lower average scores were consistently seen in all cognitive aspects, namely game knowledge (2.17), understanding of strategy (2.20), and reasoning (2.23). Relatively low scores were also found in the psychomotor aspect - role execution - teamwork (2.30). The low standard deviation values in all variables ranged from 0.484 to 0.794, indicating that the students' ability levels were relatively uniform and there were no significant gaps between them.

Further analysis was conducted to examine the frequency distribution of each assessment category (Excellent, Good, Fair, and Needs Improvement) across all aspects measured. The combined results of this distribution are visualised in Figure 1.

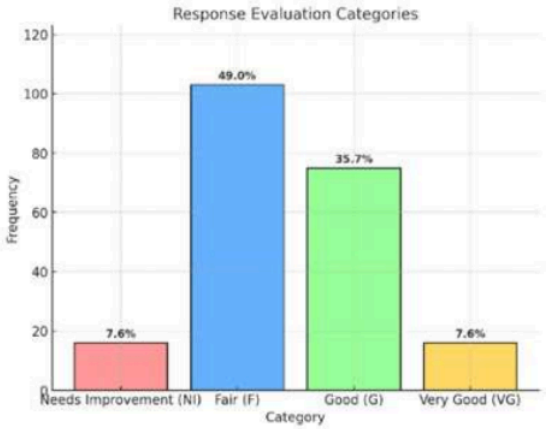

Figure 1. Frequency Distribution of Assessment Categories Across All Aspects

Based on Figure 1, out of a total of 210 assessments conducted across all aspects, the most frequently occurring category was Fair (CP) with a percentage of 49.0%. This category was followed by Good (BK) with 35.7%. The categories Very Good (SB) and Needs Improvement (PP) had a much lower frequency of occurrence, each at only 7.6%. These findings indicate that, in general, student performance is at an adequate level but has not yet reached the optimal level in most areas of development.

Discussion

The results of this study provide a comprehensive understanding of the contribution of the traditional game of Gobak Sodor to the holistic development of students, while highlighting the complex dynamics between play activities and structured learning. Data analysis reveals an interesting dichotomy: students achieved high average scores in psychomotor (Mean = 2.70) and affective (Mean = 3.10) aspects, but consistently low scores in cognitive and team role execution domains.

The high achievement in psychomotor and affective aspects confirms the hypothesis that Gobak Sodor is inherently effective as a natural stimulus. The demands of the game, which require intense physical activity such as running and dodging, automatically train fundamental motor skills without complicated technical instructions, in line with the findings (Guo et al., 2024) and (Saputra et al., 2021). This finding is empirically reinforced by recent studies (Hasan et al., 2024) in the Indonesian Journal of Physical Education and Sport Science, which confirms that the integration of traditional games significantly improves students' gross motor skills.

More specifically, the running manoeuvres and body balance in Gobak Sodor have parallels with the findings (Endawan & Sukmawati, 2022) and (Nurhasanah et al., 2024), each of which proves that traditional invasion-type games effectively improve running speed and static balance stability. Similarly, high social attitude scores validate the function of games as social-emotional learning laboratories, where dynamic interactions on the field provide an authentic context for students to practise sportsmanship and emotional regulation, as explained by (Yuan et al., 2025).

However, the most crucial finding is the significant gap in the cognitive domain (strategy, reasoning) and tactical teamwork. These low scores indicate that although students are able to interact socially well (affective), they fail to translate this social cohesion into effective strategic coordination in the field. This shows that the implementation of free play without instructional intervention is not sufficient to trigger higher-level thinking. As the results of the study show (Wibowo & Irawan, 2024) In the study of biomechanics of movement, mastery of ideal techniques and strategies requires a deep understanding that is often overlooked in free play that relies solely on physical instincts. This phenomenon can be explained through the lens of Sociocultural Learning Theory. The game of Gobak Sodor creates a Zone of Proximal Development (ZPD) or learning potential space, but without the presence of a teacher as a More Knowledgeable Other (MKO) who actively provides guidance, students play within the limits of their independent abilities and their cognitive potential is not fully realised.

This study reveals empirical evidence of a significant disparity between high social cohesion (affective) and low tactical coordination (collective cognitive), offering critical insights that positive social interactions among students do not necessarily translate into effective team strategies without pedagogical mediation. These findings are consistent with research conducted by (Chatzipanteli et al., 2016), which emphasises that tactical understanding and decision-making in invasion games do not arise as a by-product of physical activity, but rather require explicit teaching through approaches such as Teaching Games for Understanding (TGfU). Furthermore, this is consistent with the statement made by (Barney et al., 2021) in his study, where he explains that without the active role of teachers in providing scaffolding, students will fail to actualise their strategic cognitive potential. This condition is reinforced by findings (Condello et al., 2021), which concludes that intentional pedagogy is a determining variable that transforms play from a mere recreational activity into an instrument of cognitive development.

Therefore, to optimise Gobak Sodor as a holistic educational medium in the modern era, it is necessary to transform the role of teachers from mere supervisors to cognitive facilitators. Future implementation must adopt a game-based approach that integrates guiding questions and tactical discussions (tactical timeouts), as suggested by (Güven et al., 2025) and (Sari et al., 2025), to ensure that intellectual aspects develop alongside students' physical and social skills.

Conclusions

Based on the results of data analysis in this study, it can be concluded that the traditional game of Gobak Sodor is a valuable educational tool with a significant contribution to the holistic development of primary school students. This game is inherently effective in stimulating the affective domain, particularly in shaping positive social attitudes, and the psychomotor domain, especially in improving individuals' basic motor skills. However, the full potential of this game to develop the cognitive domain, including understanding strategy, tactical reasoning, and decision-making, as well as to foster complex teamwork, cannot be achieved automatically. These higher-level benefits are highly dependent on deliberate pedagogical intervention. Without scaffolding and explicit instruction from educators, cognitive aspects and strategic teamwork tend not to develop optimally.

Despite its empirical contributions, this study has several limitations that must be acknowledged. First, this study employed a descriptive design with a saturated sampling technique on a relatively small population (N=30) in one specific location (Religious Elementary School). This limits the ability to generalise the results of the study to a wider population or to educational institutions with different curriculum characteristics. Second, the study's focus on cross-sectional (momentary) observation only captures student performance at the time the game is played, so it cannot describe the retention of skills or the long-term impact of the game. Third, the absence of a control or comparison group limits the study's ability to conclude absolute causality regarding the effectiveness of a particular teaching method compared to other methods.

For future research, it is recommended to expand the participants to various types of educational institutions in order to increase external validity. Methodologically, the application of an experimental design that compares free play with structured approaches (such as the TGfU model) is highly recommended. This step is crucial to empirically prove the hypothesis that teacher intervention (instructional scaffolding) is a key variable in improving students' cognitive achievements.

Acknowledgment

The author would like to thank Allah SWT for His blessings and grace that made this research possible, as well as his parents and family for their support in enabling this research to proceed, and the Al-Jihadiah Religious Elementary School (SRA) and Sultan Idris University of Education, particularly Dr Nurzaimah Asalah as the contact person for this research, as well as his friends at UNNES GIAT Internasional 2 Malaysia.

Conflict of interest

The authors declare that there are no conflicts of interest.

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Cite this article as: Ferdiansyah Hidayat. Muhammad. Baskora Aji Putra, Ranu. (2025). The Contribution of the Traditional Game of Gobak Sodor to the Holistic Development of Students at Al-Jihadiah Religious Primary School. *Indonesian Journal of Physical Education and Sport Science, 5* (4), 485-492. https://doi.org/10.52188/ijpess.v5i4.1582

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