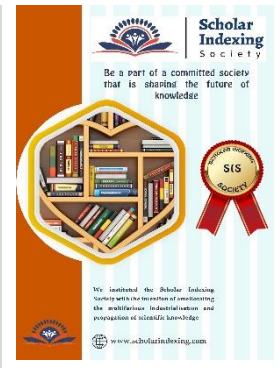




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# Measures to Improve Participation in Physical Education among Basic Schools

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**Abstract:** This research investigated strategies to enhance student involvement in Physical Education (PE) classes within Jaman South Municipality, Bono region, Ghana. Employing a descriptive cross-sectional survey with quantitative methods, the study encompassed 62 Junior High Schools totaling 7,448 students. Utilizing simple random sampling and the lottery method, five out of nine schools were chosen, yielding a sample of 372 students based on Yamane's (1967) formula. Primary data was gathered through structured questionnaires, reviewed by physical education experts whose feedback was integrated. Questionnaire reliability was confirmed via a pre-test in Berekum Municipal, outside the study area. Data analysis was conducted using SPSS version 23, applying percentages and descriptive statistics like means and standard deviations. Ethical considerations included obtaining consent from participants. The findings suggest that improving PE participation requires schools to provide qualified teachers, adequate facilities, and necessary equipment. Moreover, comprehensive training for all teachers and sufficient PE lesson time are crucial. The study advocates for heads of basic schools, stakeholders, and support officers to closely monitor and enforce PE programs. Additionally, both intrinsic and extrinsic motivation for students, along with public recognition for those excelling in PE, are recommended to foster engagement. PE teachers should also receive regular training and motivation to enhance their effectiveness.

**Keywords:** Students, Learning, Physical Education (PE), Student Participation, Ghana

DOI: <https://doi.org/10.53075/ljmsirq/65503456435354>

## I. INTRODUCTION

In 2018, the World Health Organization (WHO) initiated several campaigns and updated its policy framework to tackle the alarming global mortality rates caused by conditions linked to physical inactivity. Presently, Physical Education (PE) faces dire challenges, receiving only 2% of weekly school time, often taught by unqualified staff, and suffering from a lack of proper facilities and equipment (Kela, 2016). The quality of PE in public schools significantly depends on the instructors' qualifications; only 25.1% of PE is taught by qualified teachers, 62.3% by those without PE qualifications, and 14.9% of classes are outsourced to external providers like NGOs and professional coaches, particularly in schools with different resource levels. These teachers often grapple with implementing the curriculum effectively due to inadequate subject knowledge and poor teaching methods. Additionally, financial limitations and restricted access to necessary sports resources and facilities pose considerable obstacles (Burnett, 2020). The reality in most public primary schools is that PE programmes are delivered by generalist teachers (Du Toit 2019). Physical education delivery, especially in the primary schools, is therefore a matter of vital concern. Effective PE delivery entails PE educators working towards presenting a comprehensive PE learning opportunity that, together with appropriate instruction, promotes quality theoretical and practical movement knowledge and skills (Lundvall 2015). In the South African context, educators are expected to competently plan and design PE learning programmes from relevant policies and a sequential and comprehensive curriculum, with the aid of relevant resources and the application of developmentally appropriate teaching methodologies (Department of Higher and Tertiary Education 2015). PE provides children with the knowledge, skills and understanding necessary to perform a variety of

Received: 12 July 2023. Revised: 26 December 2023. Accepted: 31 December 2023. Published: 03 January 2024

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PA, maintain physical fitness and value as well as enjoy PA as an ongoing part of a healthy lifestyle. PE contributes towards the growth of a child into a healthy, intelligent, confident and level-headed adult. Students need to take part in PA more frequently than is possible in their schools' curricular programmes (Mungai, Sang, & Wamutitu, 2014).

Daniel, Nora, Stephen, and Boadu (2022) emphasize the significant benefits that Physical Education (PE) offers to students and society. In the school environment, a well-executed PE program can profoundly benefit society in numerous ways. PE serves various sectors by enhancing students' and society's overall physical fitness. This includes improving skill-related abilities such as speed, agility, reaction time, balance, coordination, and fundamental movement patterns. PE also promotes increased strength, endurance, flexibility, and cardiorespiratory health. Beyond physical health, PE addresses social issues, aiming to boost student retention and academic achievement as outlined by the Department of Basic Education (DBE 2017). While PE and sports alone can't solve all social challenges, research indicates they significantly contribute to behavioral and lifestyle improvements (Burnett 2018). Part of the Life Skills curriculum, PE plays a small but vital role in fostering positive social values and behaviors (Stroebe et al. 2016, 2019; Van Deventer 2011). Initiatives like policy renewal, school infrastructure enhancement, curriculum reform, and multi-level stakeholder collaboration shape the national strategic approach (DBE 2017). The National Norms and Standards for school funding developed a quintile rating system to categorize schools based on the economic status of their learners, guiding the Department of Education (DOE) in allocating funds accordingly (DOE 2004, cited in Van Wyk 2015). However, schools in lower quintiles face additional challenges due to broader social issues like low adult education levels, health concerns tied to inactivity, and high unemployment rates (Mackay 2017; Van Wyk 2015).

Maric, Kvesic, Lujan, Bianco, Zenic, Separovic, and Sekulic (2020) found that students engaged in Physical Education (PE) exhibit higher energy and alertness compared to their inactive peers. This engagement significantly enhances their productivity across life facets, including academics, suggesting PE's vital role in nurturing well-rounded, healthy, and confident individuals. Consequently, students should engage more frequently in Physical Activity (PA) beyond what school curricula typically offer (Mungai et al., 2014). Amusa, Toriola, and Goon (2013) noted that many African societies traditionally view PE as mere play or leisure, overlooking its substantial contributions to holistic student development.

Daniel et al. (2022) noted a disinterest among qualified PE teachers in teaching the subject, attributing it to its lesser status compared to subjects like Mathematics and English. Often, PE instruction is relegated to trainee teachers, who teach it as a requirement of their training. Once certified, they tend to de-prioritize PE, following the precedent set by their more experienced counterparts. This issue is widespread, with the Jaman South Municipality of the Bono region of Ghana experiencing similar challenges in PE participation. This study aims to fill the existing research gap on this topic in the specified region.

In their 2016 study, Osborne and colleagues identified several key challenges Physical Education (PE) teachers face, including low pay, unsafe facilities, and a scarcity of resources. They noted that PE is often undervalued, with insufficient space and time, and viewed merely as leisure. Additionally, the researchers highlighted the issue of some teachers approaching PE without proper planning, negatively impacting student engagement and family involvement. The call for enhanced infrastructure, family participation, and support from educational and governmental bodies was evident. Edward's 2015 research corroborated these findings, pointing out the lack of adequate facilities and a prevalent negative attitude among teachers towards PE. The lack of preparedness and organization among teachers led to ineffective PE programs, ultimately hindering the educational and health benefits for students.

A study conducted by Kela (2016) found that, most of the schools in Zambezi Region had a lack of qualified teachers, lack or shortage of facilities, "non-educational" status, and non-promotional subject, lack of monitoring, supervising and inspection of Physical Education. There were no inspectors from the regional education offices to oversee whether the subject was being taught according to the national standards outlined in the curriculum. The status of PE in Namibian school shows that the subject is timetabled, with 1 period per week (40 minutes). PE has some supporting documents such as syllabuses, prescribed book and most taught by teachers without PE qualifications (Kela, 2016).

Worldwide research outcomes for quantity and quality of PE facilities presented, indicates a higher level of 57% of insufficient provision than sufficient (43%) delivery, a situation which is also apparent in Latin America, Middle East and African regions. Statistics comparison of 2022 facts once more points to higher altitudes of insufficient elevations of provision worldwide and locally in all developing countries such as the Middle East 54%, Africa 68% and Latin America 65%. Even though hopefully the Latin American regions show an important decrease from 87% to 65% of inadequate levels of providing an increase from 13% to 35% in adequate quantity of facilities (New Era, 2019). Generally, the research on the availability and conditions of sports equipment and facilities on the African continent shows that there are a lot of available and dilapidated sports equipment in schools, lack of finances for repairs, lack of budgeted funds for sports, lack of needed infrastructures, lack of playing fields, lack of facilities and equipment and lack of instructional materials (New Era, 2019).

Mercy, Sunday and Solomon (2022) assessed the implementation of physical education (PE) component within the basic science technology subjects (BST) curriculum and the time allocation in comparison to other BST subjects. Descriptive survey research was adapted. The population was 109,778, comprising 109,383 students, 78 PE teachers and 317 head teachers of public Junior Secondary School (JSS), representing eighteen (18) Local Government Areas (LGAs) in Edo State. The sample size was 1,060 comprising 70 PE teachers, 90 Head teachers and 900 students; and they were selected using multi-stage sampling procedure. Two instruments were used to obtain data: "Implementation of PE component of BST curriculum questionnaire (IPECBSTCQ) and Time Allocation and General time table information for PE and BST subjects schedule (TAGTIPEBSTS). The Cronbach alpha statistics was used to determine the reliability of the instrument, the r-value of 0.95 was obtained for the IPECBSTCQ. Main findings suggest an endorsement of policy statements related to PE within the BST by the PE and Head teachers. Also, PE is not accorded necessary

attention compared to other subjects within the BST curriculum. It was concluded that PE and other Head teachers were conversant with National Policy on Education (NPE) stipulations as relates to PE within the BST curriculum; just as it was necessary for more time to be allotted to PE on the general time table in comparison to other BST subjects. It was chiefly recommended that supervisory officials of the Ministry of Education should ensure strict adherence to policy implementation related to PE within the BST.

Kalina (2019) reveals that adapting training programs are used to reflect the psychophysical features of the future professional activities of graduates; poetization of education (load differentiation and consideration of preferences in the choice of the type of motor activity); the use of modern fitness technologies and other means in training sessions that increase the students' motivation for the training activities. The survey results show that today, even realizing the role of physical exercises in maintaining health, the motivation of the majority of students is based on the need to get a credit for the discipline, and the development of interests is limited by the existing conditions for the organization of the training process at the university. The article also specifies the elements of the high school physical education system aimed at the improvement of its effectiveness.

Milne (2019) investigated ways of improving PE participation from both the viewpoints of children at different levels of ability and also from the teachers. 20 children (10 talented, 10 non-talented) from a Year 4 (aged 8 - 9 years old) were interviewed and 30 teachers completed an online questionnaire. The data collected was of mixed methodology. The data was analyzed through the coding process and the results showed that to prepare children for competition, strategies were dependent upon the type of child. For the talented children these were: frequent opportunities to practice skills, regular opportunities to compete, working alongside someone of the same ability. For the non-talented children, they needed to: compete in a safe environment that focused upon improving personal best and to work alongside someone of the same ability. The results also indicated that teachers needed the following support: regular continuous professional development (CPD) to improve Physical Education subject knowledge and team teaching to enhance opportunities for competition within lessons.

DCMS (2013) stated that the levels of competitive sport are not as high as they should be in P.E., and there was limited access to a high standard of competitive sport (Ofsted, 2013). The Taking Part survey (DCMS, 2013) revealed 64% of children aged 5 - 10 had participated in competitive sport over a 12-month time period. While this statistic accounts for a large amount of primary aged children, it raises the question, why were 36% of children not engaging in competitive sport? One suggestion could be that children are not having the opportunities within their school to prepare for the School Games competitions. Further highlighting the importance of this research to inform how we could prepare children for competitive sport, such as the various levels of the School Games. Although the approach of the School Games appears to be a pragmatic way of motivating young people for a highly competitive world, there are some views that suggest this approach could have negative effects.

Ojo (2015) examined Teaching Physical Education in Nigerian Secondary Schools is a Barrier: An Implication for Future Generation, A Case Study of Ado Metropolis Secondary Schools in Ekiti State, Nigeria. Purposive sampling technique was used to adopt 90 (Ninety) respondents been PE teachers in Ado metropolis secondary schools in Ekiti State, Nigeria. Questionnaire was the only instrument used and it was developed by researcher titled "Teaching Physical Education is a Barrier in Ado Metropolis Secondary Schools Questionnaire" (TPEBAMSSQ) and validated by expert in the field of physical education and sport, reliability coefficient was 0.77 after using Pearson Product Moment Correlation (PPMC). Frequency counts and simple percentage was used to analyze demographic information of the respondents while linear regression was used to test the hypotheses at 0.05 level of significance. The findings revealed that teacher competency was 3.038 calculated F-ratio and it was most significant barrier in teaching physical education in secondary schools in Ekiti State, gender difference calculated F-ratio was 3.026, facilities and equipment calculated F-ratio was 2.142, students' interest in physical education calculated F-ratio was 2.104 while overloaded curriculum calculated F-ratio was 2.051. The variables tested were duly significant because they all higher than level of significance which is 0.05. It was recommended among others that trained physical education teachers and sports coaches should be employed to all the primary and secondary schools.

Yakubu, Olalekan, Ikazuagbe, William and Khadijat (2019) investigated the social factors influencing sport participation among secondary school students in Oyo West Local Government Area, Oyo State. A descriptive survey research design was adopted for the research; the population of the study was all 10,385 secondary school students in Oyo West Local Government, Oyo State. Multistage random sampling technique which included purposive, proportionate and random sample techniques were used to select 642 of the students. The instrument for data collection was a researchers-designed questionnaire, validated by experts and the reliability coefficient was  $r = .76$ . Data were analyzed using descriptive statistics of frequency and percentage for the demographic characteristics and inferential statistics of chi-square was used to test the hypotheses at 0.05 level of significance. Results of the study indicated that the following factors: parental influence  $n = 642$ ,  $\chi^2 (9) = 505.321 > 16.92$ , sport facilities  $n = 642$ ,  $\chi^2 (9) = 455.184 > 16.92$ , gender  $n = 642$ ,  $\chi^2 (9) = 331.588 > 16.92$ , and economic status  $n = 642$ ,  $\chi^2 (9) = 447.408 > 16.92$  significantly influenced sport participation among secondary school students in Oyo State. It was concluded that sports participation among secondary school students is greatly influence by these social factors. Therefore, it is recommended that parents should encourage their children to participate in sports, and the government should support the school authorities in provision of a dequate sport facilities for schools. Equal opportunities should be provided for both male and female students to fully participate in sports.

## 2. METHODS

### Research Design

In this research, a quantitative approach was adopted through the use of a descriptive cross-sectional survey. This methodology, recognized as a scientific technique, involves the careful observation and detailed documentation of the subject's

current state without exerting any influence or alteration (Hall & Hall, 2020). The primary objective of employing this descriptive cross-sectional design is to acquire comprehensive and in-depth information about a particular trait or characteristic that is of interest within a specified field of study. By doing so, the study aims to enhance understanding and provide a clearer picture of the phenomenon being investigated, thereby contributing valuable insights to the academic community and practitioners in the relevant field.

### Study Area

This research took place in the Jaman South Municipal, a notable area within the Bono region of Ghana. The chosen study site provides a detailed and vivid representation of the setting, which not only helps transport readers directly to the heart of the research environment but also assists in creating a clear image of the study's participants. This effective description ensures that readers can engage more fully with the context and nuances of the study, thereby enhancing their understanding of the research and its implications (Treagust & Won, 2023).

### Population

The study incorporated a comprehensive analysis of 62 Junior High Schools located in the municipality, as reported by the Jaman Municipal Education Office in 2021. These schools collectively boasted an enrollment of 7,448 students, establishing a broad base for potential research participants. Therefore, the primary group of interest for this research comprised these 7,448 students, from which a representative sample was carefully selected for detailed study. Additionally, for organizational and administrative purposes, these schools were systematically divided into nine separate circuits, a structure confirmed by the Jaman South Municipal Education Office in 2021. This segmentation likely facilitated more manageable and focused data collection and analysis within the broader scope of the study.

### Sample and Sampling Techniques

In order to answer the research questions, it is doubtful that researcher should be able to collect data from all cases. Thus, there is a need to select a sample. The entire set of cases from which researcher sample is drawn in called the population. Since, researchers neither have time nor the resources to analysis the entire population so they apply sampling technique to reduce the number of cases (Taherdoost, 2016). As per Amedahe and Gyimah (2016) cited in Iddrisu (2020), quantitative studies with sample size of 5% to 20% of the population is sufficient for generalization. Through simple random sampling techniques, the study employed the lottery method to select five out of the nine junior high schools to extract a sample of 372 students using the Yamane (1967) sampling determination formula. Yamane (1967) formula:  $n = N / (1 + N(e)^2)$

Thus:

$$n = 7448 / (1 + 7448(0.05)^2)$$

$$n = 7448 / (1 + 18.62)$$

$$n = 7448 / 20$$

$$n = 372$$

### Data Collection Instrument

The study adopts primary sources of data collection techniques using questionnaire. Primary sources are original sources from which the researcher directly collects data that have not been collected previously (Clark, Foster, Bryman and Sloan, 2021). According to Kuranchie (2021), a questionnaire is used in quantitative research as it is good for collecting statistically quantifiable data. Likert Scales have an advantage in that they do not expect a simple yes / no answer from the respondent, but rather allow for degrees of opinion, and even no opinion at all. Therefore, quantitative data is obtained, which means that the data can be analyzed with relative ease. Offering anonymity on self-administered questionnaires should further reduce social pressure, and thus may likewise reduce social desirability bias.

### Validity and Reliability Evidence

Validity is the level at which the results of a study can be meaningfully and accurately inferred (Knekta, Runyon & Eddy, 2019). To ensure validity of the study, experts on physical education were tasked to assess the items on the questionnaire for which their inputs were considered for modifications. Reliability is related to identifying uniformity of measure in repeated studies. A measure that is reliable is one that when replicated a number of times will provide similar outcomes (Tetteh, Amoako-Gyampah & Kwarteng, 2021). Reliability of the questionnaire items were established using a pre-test from the Berekum Municipal being outside the study area.

### Data Collection Procedure

Questionnaire were sent personally and distributed to the respondents in order to afford the researcher the opportunity to brief the respondents on the objective of the study, as well as offer any assistance that was needed by the respondents. The respondents were assured confidentiality of the information they provided. Respondents were also allowed to ask questions in respect to the purpose of the study. The instruments were administered within a period of 25 to 30 minutes and retrieved afterwards for a maximum of three days in each selected school.

### Data Analysis Method

The data that were gathered underwent a thorough verification process to identify and correct any discrepancies or errors before any analytical procedures were initiated. Following this preliminary step, the cleaned data were subjected to an in-depth analysis using the Statistical Package for Social Sciences (SPSS), specifically version 23. This analysis involved calculating percentages to understand the distribution and proportion of various factors within the data. Additionally, descriptive statistical techniques were employed, including the calculation of means to determine the average values and standard deviations to assess the variability and dispersion of the data points around the mean. These statistical methods provided a comprehensive overview and detailed understanding of the underlying patterns and trends within the data.

### 3. RESULTS AND DISCUSSION

The purpose of this study was to examine ways of improving student participation in Physical Education activities in the Jaman South Municipality of the Bono region of Ghana. This chapter presents the study's findings and discusses them in the context of the research objectives that guided the study.

#### Personal Information of Respondents

This section discusses personal information of respondents and the variables were, gender, age and programme of offer. Table 2 shows the distribution of gender, years of respondents and programmes of offer.

**Table 2: Personal information of Respondents**

Variables	Category	Frequency	Percentages
Gender	Male	187	50.3
	Female	185	49.7
Form	JHS1	114	30.6
	JHS2	66	17.7
	JHS3	192	51.6

**Source: Field Survey, (2023)**

Results in Table 2 shows that 187 (50.3%) of the respondents were males and 185 representing (49.7%) were females. This means that the male students in the school were more than the female students. The difference is not very wide. On the form or class of students, the results indicate that 114 constituting 30.6% of students were in JHS1, 66 representing 17.7% of the respondents were in JHS2. 192 representing 51.6% of students were in form 3. This indicates that there were more students in JHS1 and JHS3 than those in JHS2.

#### Measures to Improve Physical Education Participation among Students

To examine the views of students on the measures to improve of Physical Education in the study area, six items were assessed in line with the research objective. The respondents rated their levels of agreement and disagreement on a 1 – 5 scale as (1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= Strongly agree). The criterion mean was computed at  $1+2+3+4+5=15$ . Therefore,  $15/5=3.0$  is used as the criterion value for this study.

The average marks of the responses that are 3.0 indicate that responses are not sure or undecided about the items. Average marks below 3.0 indicate that respondents disagree to the item asked where as average marks above 3.0 show that responses agree to the items showing that respondents have positive views of the item. However, the grand average mark determines whether responses are generally in agreement, divided or in disagreement.

**Table 3: Measures to Improve PE**

Variables	Mean	Std. Dev.
School authorities must do so to provide a PE teacher.	4.56	.635
The school authorities must provide a playing ground for various PE activities.	3.95	.621
The school should be provided with gadgets such as football, whistle, netball, jerseys in observing PE activities.	3.93	.697
I think that all teachers should be trained to be able to take us through PE lessons and activities.	4.13	.813
There should be enough time allocated to PE lessons in our school.	4.07	.880

Students should be adequately motivated to take part in PE lessons.	4.08	.903
<b>Total</b>	<b>4.12</b>	<b>0.76</b>

**Source: Field Survey, (2023)**

Results in Table 3 summarizes the means and standard deviations of six variables used in examining the measures to improve PE in the study area. The observation made from the table in respect of all constructs is that participants with a grand mean of 4.12 and a standard deviation of 0.76 agree that all the measures raised should be implemented to ensure student participation PE. The measures that were agreed were school authorities providing a PE teacher [Mean= 4.56, SD=.635], school authorities providing a playing ground for various PE activities [Mean= 3.95, SD=.621], school providing gadgets such as football, whistle, netball, jerseys in observing PE activities [Mean= 3.93, SD = .697], all teachers being trained to be able to take students through PE lessons and activities [Mean= 4.13, SD = .813], provision of enough time allocated to PE lessons schools [Mean= 4.07, SD = .880], adequately motivating students to take part in PE lessons [Mean= 4.08, SD = .903]. Contrary to the finding is the work of Milne (2019) which investigated ways of improving PE participation from both the viewpoints of children at different levels of ability and also from the teachers. The data collected was of mixed methodology. The data was analysed through the coding process and the results showed that to prepare children for competition, strategies were dependent upon the type of child. For the talented children these were: frequent opportunities to practice skills, regular opportunities to compete, working alongside someone of the same ability. For the non-talented children, they needed to: compete in a safe environment that focused upon improving personal best and to work alongside someone of the same ability. The results also indicated that teachers needed the following support: regular continuous professional development (CPD) to improve Physical Education subject knowledge and team teaching to enhance opportunities for competition within lessons (Milne, 2019).

#### 4. RECOMMENDATIONS

Based on the research's conclusions, it's essential that headteachers of elementary institutions, relevant stakeholders, and School Improvement and Support Officers (SISOs) commit to regularly supervising the activities within these schools. They should also actively and robustly ensure that physical education (PE) programs are not just implemented but are a core part of the school curriculum. It's crucial that students are encouraged to engage in PE activities through both internal (self-motivation) and external (rewards and recognition) means. Recognizing and publicly rewarding students who show outstanding performance in PE can serve as a strong incentive for others to participate more actively in these activities.

Moreover, it is imperative that PE teachers are not overlooked. They should be provided with frequent professional development workshops aimed at enhancing their knowledge and teaching methods in PE. This not only ensures that they are up-to-date with the latest in physical education but also boosts their motivation and commitment to teaching. Similarly, incentivizing teachers through various motivational strategies can lead to a more enthusiastic and effective teaching approach, which in turn can significantly impact students' participation and performance in PE. All these measures together will foster a more vibrant, active, and healthy school environment where physical education is valued and prioritized.

#### 5. CONCLUSION

Enhancing participation in physical education (PE) among basic schools is pivotal for fostering a well-rounded educational experience and promoting lifelong health and wellness. This study has highlighted the necessity for qualified teachers, adequate facilities, and necessary equipment to improve PE participation. It also emphasizes the importance of comprehensive training for all teachers and sufficient PE lesson time. Encouraging students through both intrinsic and extrinsic motivation, along with public recognition for those excelling in PE, is recommended to foster engagement and commitment. Additionally, regular professional development and motivation for PE teachers are crucial to enhance their effectiveness and ensure they are equipped with the latest knowledge and teaching methods. By implementing these measures, basic schools can create a more vibrant, active, and healthy environment where physical education is valued and prioritized, ultimately leading to improved student participation and performance.

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