

Article Info

Received: 18 May 2021 | Revised Submission: 28 Jul 2021 | Accepted: 05 Sept 2021 | Available online: 15 Sept 2021

Impact of Play Way Method on the Academic Achievement of Senior Secondary School Students in Physics

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ABSTRACT

This study investigated the impact of play-way method on the academic achievement of senior secondary school students in Udenu local government area of Enugu state. The Research work was guided by two (2) research questions. A simple random sampling technique was used for the study. The instrument used for this study was a structured questionnaire, for one hundred (100) respondents in the area of study. The study is meant to achieve two (2) objectives which are to determine the effect of play-way method of teaching on the academic achievement of students in physics in senior Secondary schools in Udenu Local Government Area, determine impact of play-way method of teaching on gender achievement in physics in senior secondary schools in Udenu Local Government Area. There is no significant difference in the achievement of student taught using play-way method of teaching physics and those taught using lecture method of teaching physics. The study also reveal that play-way method of teaching does not affect gender in physics in senior secondary schools in Udenu Local Government Area. The study however, recommended that The government and indeed all stakeholders in education should make special provision for play-way method of teaching and teaching methods and as much possible they should encourage' their usage in the classroom. The teaching profession should be strengthened so that all prospective teachers should understand how methods of teaching works play-way.

Keywords: Teaching Methods; Academic Performance; School.

1.0 Introduction

The mastery of a subject is determined by the performance of the students in such subject at a prescribed examination. And interactive activity between a teacher and students is expected to produce learning outcomes in the learners. When such an activity failed to produce a change in the behaviour in the learner, then there is problem. Performance of students in science generally is a major concern to science educators Aghyeneku (2015) in Sakiyo and Sofeme (2013) noted that students performance in science subjects is low in both national and state examinations. A number of reasons can be identified to be accountable for the poor performance of students in sciences. These include, the science curricular, teacher methods of teaching, parents, government, lack of science facilities and others (Ahiakwo, 2013). Survey from

schools (Ajayi, 2017) reveals that inadequacy of good instructional material, equipment and laboratory facilities in the schools affect negatively the effective learning of Physics in schools. It was argued by Adufe (2012) that teaching is based on methods which at the long run bring about effective teaching.

Teaching, according to Oladipo and Ayeni (2009) involves bringing about or at least facilitating desirable changes in learners. However, effective teaching requires the teacher to step out of the realm of personal experience and step into the world of the learners. (Brown, 2010). It is the learner who must be engaged for learning to occur, the learner is the one who must take the commitment to learn. Instruction is the transmission to the learner and the acquisition by him on specific skills, information, knowledge or other established data. The mode of instruction or teaching applied in achieving these objectives is

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referred to as method. Methodology therefore, refers to the processes and techniques a teacher of either secondary education uses to transmit facts, skills, information and knowledge to the learners so as to facilitate the accomplishment of the set objectives. Research evidence shows that the major problem in the secondary schools is the method of imparting knowledge.

To this Adepoju (2016) citing Kerneest and Levin (2013) revealed the difficulties children of some ages (usually secondary level) encountered when they are instructed using verbal approach. This is also confirmed as the study carried out in Nigeria by Busari (2011) revealed that the method presently employed in teaching, in most of our public secondary schools is inadequate or not effective. It is of a necessity that a skillful teacher needs to be conversant with various teaching strategies which may be applied to subjects at different class situations. Adufe (2013) affirms that many methods of teaching exist in education and these methods are meant to make teacher succeed in their bid to disseminate knowledge.

However, the success in the use of any method differs as a result of an intelligent analysis of the objectives, the pupils in class, the curriculum content or the type of subject matter. Also, the impact of any teaching method is not only limited to the conditions surrounding the teaching but also the advantages and the disadvantages of a particular method in a particular situation should not be left out. The impact of teachers in the performance of the students in physics is much among the senior secondary schools in Udenu metropolis. The teachers are the vacillators who are to impact into the students the concept expected to be learnt. However Olarewaju (2012) and Nwagbo (2010) are of the opinion that ignorance of the teachers or neglect of activity oriented method by the teacher grossly contributes to students' low performance in Physics.

The issue of professionalism in teaching has been on course for quite some decades Ngada (2013) in Fajonyomi (2009) emphasized that the success or failure of any educational programmed rests majorly on the adequate availability of qualified (professional) competent and dedicated teachers. Seweje and Jegede (2015) noted that the ability of a teacher to teach is not derived only from one's academic background but it is based upon outstanding pedagogical skill acquired. The

realization of the natural growth in technology has high impact on the quality of Physics teacher. Also, Ckenzie, et al (2010) in Adesanya (2016) argues that the objectives of the teacher should also be considered before the selection of any method. This implies that what the teacher intends to achieve at the end of the lesson should be in line with the selected method.

As a result of these factors, it is advisable that a skillful teacher in secondary level of education should consider these factors when he/she needed to achieve his/her stated objectives. It is however, sustained that various methods of teaching exist but there is a distinctive difference between them. There are methods used in higher education which virtually cannot be use iii the lower level of education which secondary education exist. Secondary education therefore, gives room for any method which will help in facilitating the teaching and learning of a teacher and also make the stated objectives achievable.

2.0 Statement of the Problem

In spite of the desire for technological development, couple with the fact that Physics is a very vital subject for technological development and as such, its teaching and learning as well as students' poor academic performance have become a source of concerns to all stakeholders. The problem of the present study is to investigate the teaching method on the performance of senior secondary school in Physics in Udenu metropolis.

2.1 Research questions

- What is the effect of play-way method of teaching on the academic achievement of physics in senior Secondary schools in Udenu Local Government Area?
- How does play-way method of teaching affect gender achievement in physics in senior secondary schools in Udenu Local Government Area?

3.0 Resaerch Methodology

This chapter was concerned with the methodology employed in the study, it consisted if a description of research design of the study, area of study, population of the study, sample and sampling techniques, research instrument, data collection,

design for test hypothesis and method of data analysis.

3.1 Research design

The research design used in this study was survey design. A survey research is one in which a group of people or items are studied by collecting and analyzing data from a few people considered being representative of the entire population. The choice of this type of design is based on the intent of the study which was to survey the effect of teachers' qualification on the performance of students in senior secondary school in Physics in Udenu Local Government Area. Udenu has three major markets viz: Afor Obollo,

3.2 Sample and sampling technique

This study employs a sample of all the teachers of physics in the thirty (30) secondary schools within Udenu Local Government Area. A simple random sampling (technique) was used in which thirty (30) senior secondary school within Udenu Local Government Area, and their teachers of physics had equal opportunity of been selected and observed.

3.3 Instrument for the study

The instrument that was used for data collection in this research work was structured questionnaire. The expected respondents were teachers in the school covered by the study. The questionnaire was constructed with question that seeks to bring Out the desired responses on the impact of play-way method on the academic achievement Area of Benue State.

3.4 Method of data analysis

Arithmetic mean of 1 2 3 4 was used in answering research questionnaire. The mean scores of above 2.50 was used as cut-off point. Any mean above 2.50 was considered to be agreed upon by the respondent, while the mean rating below 2.50 was considered disagreed by the respondent. The hypothesis was tested using Chi-square analysis

4.0 Result

This section deals with data presentation and discussion of findings. The tables were used as medium of data presentation. The discussion is based on the various research question asked and the hypothesis formulated.

4.1 Answer to research questions

4.1.1 Research question, answer- What is the effect of play-way method of teaching on the academic achievement of physics in senior Secondary schools in Udenu Local Government Area?

Table 1 indicates the three items on effective use of play-way method of teaching, which the items had their mean value ranged from 3.96 to 4.66. This shows that the mean values were above the cut off points of 2.50. Inferences from the analysis shows that the effective use of play-way method of teaching motivate students to learn in Udenu Local Government Area of Benue State.

4.1.2 Research question 2

How does play-way method of teaching affect gender achievement in physics in Senior secondary schools in Udenu Local Government Area

Table 1: Shows the Extent to Which the Play-way Method of Teaching Motivate Students to Learn

z	SA (5)	A (4)	D (2)	SD (1)	$\bar{X}$	S.D	Remark
The use of play-way teaching motivate students to achieve academically in Physics	74370	228	24	11	4.66	0.695 9	Accept
Play-way method of teaching sustain my interest in learning Physics	43215	27108	1326	22	3.96	1.1306	Accept
The use of play-way materials aid assimilation of Learning experiences in Physics	59295	30120	36	22	4.42	0.8623	Accept
The method of teaching that may interest the girl child to achieve may mar the male child's Achievement motivation	47245	31124	612	77	4.09	1.1924	Reject

Table 2: Shows the Result to Which the Use of Play-way Method of Teaching Aids Student's Achievement in Physics

Statement	SA (5)	A (4)	D (2)	SD (1)	$\bar{X}$	S.D	Remark
The use of play-way method of teaching enhance gender achievement in Physics	73365	2288	36	11	4.63	0.7437	Accept
The use of play-way method of teaching have a negative influence on student in physic	55275	33132	36	44	4.32	0.9887	Accept
Play-way method of teaching serve as punishment to students achievements in Physics	21105	34136	1938	1212	3.33	1.9102	Reject
The use of play-way method of teaching delayed feedback mar students achievement in physics	2110	31124	2244	1313	3.27	1.3627	Reject

Table 2 indicates the three items on the use of rewards which aid students' achievement in Physics. The items had their mean value ranged from 3.27 to 4.32. This shows that the mean values were above the cut off points of 2.50. Inferences from the analysis indicates that the use of play-way of teaching aid students' achievement in Physics in Udeno Local Government Area of Benue State.

Table 3: Shows the Summary of the Findings Showing t-test Analysis of the Effect of Gender on Play-way Method of Teaching Physic

Groups	N	$\bar{X}$	S ²	t-cal	t-crt	Decision
Responses of positive effect of play-way method of teaching on gender	50	7.54	1.72	1.82	2.00	reject the null hypothesis
Responses of negative effect of play-way method of teaching on gender	50	4.42	2.12	11.258		

From table 3, it shows that the t-calculated is 8.768 at 0.05 level of significance. Since the t-calculated is greater than the t-critical, the null hypothesis of no significance difference is rejected. Therefore, in conclusion play-way method of teaching does not affect gender in physics in senior secondary schools in Udeno Local Government Area.

4.2 Discussion of Findings

The result of the study shows that the mean values were above the cut off points of 2.50.

Inferences from the analysis shows that the effective use of play-way method of teaching motivate students to learn in Udeno Local Government Area of Benue State. The result reveals that there is no significant difference in the achievement of student taught using play-way method of teaching physics and those taught using lecture method of teaching physics. The result collaborates with that of bank and Finlapson (2015) who stressed that successful students have significant higher motivation for achievement and interest in physics when taught with play-way method of teaching. Also the findings of Stephen (19) state that, academic achievement of physics is highly correlated with play-way method of teaching, is in agreement with these findings.

Inferences from the result analysis also indicates that, the use of play-way of teaching aid students' achievement in Physics in Udeno Local Government Area of Benue State. In conclusion of the result in table 2 shows that play-way method of teaching does not affect gender in physics in senior secondary schools in Udeno Local Government Area. This is in line with the result of Rust, (2010) who listed interest; which he referred to as the pattern of choice among alternatives as another factor that arouses play-way method of teaching. For motivation to be achieved the teacher should unstill interest in the students using effective and appropriate strategies to motivate method of teaching students. For this desire to be achieved, the teacher with the intention of arousing or generating interest should endeavour

to link the learner's with play-way method of teaching.

5.0 Conclusions

From the research findings, it is easy to see that:

- The play-way method of teaching in an academic environment generally, and in Physics in particular is crucial for the attainment of academic excellence.
- Socio-economic background of students, status of teaching methods also affects significantly achievement motivation.

Conclusively therefore, the effective application of play-way method of teaching strategies as outlined in the conceptual framework of this research if effectively applied will enhance academic achievement and break the chain of failure in Physics which has been decried by educational researchers.

Considering the importance of play-way method of teaching on the academic achievement of secondary school students in Physics, the research has the following recommendations to make. The federal, state and local government and indeed all stakeholders in education should make special provision for play-way method of teaching and teaching methods and as much possible they should encourage' their usage in the classroom. The teaching profession should be strengthened so that all prospective teachers should understand how methods of teaching works play-way.

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