

# Edutainment as a Catalyst to Improving Students' Interest in and Attitude to Biology in Secondary School in Lagos State, Nigeria

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## **Abstract**

*This study determined the effectiveness of using edutainment as a catalyst to improving students interest in and attitude to Biology in selected secondary schools in Lagos State, Nigeria Two research questions and one hypothesis and one research question were used to guide this study. The study was carried out in District 1 of Lagos state school districts. The samples for the study comprised of 60 SS II students which were drawn using the purposive sampling technique from two intact classes in a private school. The experimental group was taught using edutainment method, while the control group was taught using traditional method. Instruments used were Questionnaire on students interest in and attitude to Biology. Data collected were analyzed using descriptive statistics and content analysis. It was found that edutainment method of teaching has impact on students' attitude and interest towards Biology. Based on these findings of the study, recommendations were proffered among others, that teachers should integrate edutainment into the teaching of Biology to students' interest in and attitude to Biology.*

**Keywords:** Edutainment, inequality, interest and attitude, Biology

## **Introduction**

There are series of new form of instructional approaches that are emerging rapidly daily to improve instruction, among them is edutainment. Edutainment is a term that brings about the amalgamation of education, and entertainment, some level of amusement and guidance could be required to bring about quality instruction. The focus of this approach is to bring enjoyment to the process of learning. The combination of education and entertainment is known as edutainment therefore edutainment has been defined as an application compounded with educational aims and measurements then providing learners with quality facts regarding the value of life, using resource and methods and having a good time with the way of creating and having experience (Aksakala, 2014).

The term edutainment was developed by Bob Heyman, while producing document for the National Geographic society in the United State of America. Edutainment means education entertainment. It consists of instructional techniques which engages and motivates the learners as well as enhances learning; it can be attributed to innovative educational technologies that can enhance future education (Chilingaryan, and Zvereva, 2020).

Edutainment techniques could be in various forms, such as games, movie scene, show, museum, zoos, comedic drama, especially by using computer to create fun for children in learning and bring about

child compute interaction (Wirawan, Muhammad, & Agushinta 2013)

Edutainment method of teaching launches students into better instructional method in different categories of subject. This method offers students access to watch and participate in the process of instruction. It is an indisputable fact that the traditional methods of teaching are now obsolete and inappropriate. Despite the impact the trend seems to add to instruction, there are still problem of teachers and schools not been able to afford modern scientific equipment so it should be realised that bringing new trend like edutainment would not only solve part of the challenges faced by teachers it will encourage students learning (Kricina 2015)

Edutainment is a fun related instructional technique; it is to improve the learners' academic achievement as well as turning scientific concepts could be turned to entertaining events or activities. For edutainment to be effective training of students is essential, tis would lead to students' capability for self-directed learning and self-growth. Though at initial stage learners' ability may be low to learning entertainment but with constant practice learners existing behavior changes could be modified thus leading to improvement in cognitive behavioral and affective domains (Vlachopoulos and Makri 2017)

There are many reasons why students have difficulties in learning science, the nature of science itself and its teaching methods, the overloaded

curriculum, the abstract and interdisciplinary nature of scientific concepts and difficulties with the textbooks are some of such factors preventing students from learning science effectively (Zeidan, 2010),

Students' diminishing interest in learning science could be connected to the curriculum content being overloaded and not generally related to employability, the lack of opportunity to include topics of interest, the abstract nature of the mode of instruction especially when it does not give room for clear prospect that could lead to complete creativity. This kind of notion and alienation could make science subjects become evaded subjects. In Nigeria for instance it is a fact that within a short time from now very few students would offer Biology because Biology is no more a compulsory subject in the school curriculum and this would have a great impact on science subjects in schools. To boost students interest in science subject new mode of instruction like edutainment would be very apt. Lack of interest among students not only threatens the production of the next generation of scientists, but more importantly, would impede students attitude from becoming scientifically literate, as they would unlikely or even unable to engage with important science-related societal issues (Swarat, Ortony, and Revelle 2012).

The problem of female education is a matter of urgency, female education is one of great predicaments that face the global community, and it has been observed that gender inequality affects females' rights, responsibilities, opportunities and capabilities, including their access to and treatment in school. According to Coleman, (2017) solutions to this problem include addressing the cultural bias against putting girls in school, eradicating gender based violence, bettering infrastructure deficiencies, and increasing female role models.

From the cultural perspective, the barriers faced by girls with low educational attainment vary by countries and cultures which made educational attainment to be very difficult. The barriers differ, which cut across individual/household level where poverty; low perceived value of girls' education; gendered traditional practices; early marriage; early pregnancy; lack of parental support for education; death or illness of parents; and lack of interest in school which could link to above mentioned factors and some other related factors (Midwest 2019). A number of studies with reference to underdeveloped countries reveal that girls are underrepresented in the fields of science and technology especially at

secondary and tertiary level of education. It was also identified that a basic distinction between men and women which is socially and culturally determined creates unequal power relation in social life (Alam, 2011).

In view of the above assertion, stakeholders in the educational sector should come up with devices that would bring about equity among genders thus making the teaching and learning of science more impactful and ensure that the girl child is not left behind. Heidari, Babor, De Castro, Tort, and Curno, (2016) established that the move is expected to address misused opportunities for innovation, understanding the underlying differences and similarities, exploring applicability, uptake and impact of technological innovations and getting deeper insight into cognitive variability that would lead to more innovative approaches and better solutions to meet the needs of society.

It has been noted that Nigeria students are not manifesting scientific skill as required and there has not been a great improvement in their achievement in science subjects despite the fast rate of scientific and technological development that is on-going on in the diaspora. Notable in this is that a lot of students find some science subjects very complex to understand. Some students perceived some topics like Hereditary, Genetics, and Ecology as difficult concepts (Agboghroma and. Oyovwi, 2015). Responsible for this among other factors is that most schools lag behind in terms of facilities, equipment and unqualified teaching staff which invariably affect students' achievement in science both at the junior and senior secondary school levels. (Alabi 2017) Biology is a natural science that involves the study of plant and other living organisms. It has been observed by teachers, that low percentage of questions are been answered correctly thus wondered why students have difficulties in answering Biology questions correctly especially at national examination. From this perspective, there appears to be a clear need for further and deeper insight into the factors that may cause high achievement in Biology (Ali, Toriman, Gasim, & Abidin 2014). It is against this background that this study therefore embarked on utilizing edutainment approach in instruction to determine gender issues, students' interest and attitudinal factors in Biology in secondary school.

#### **Statement of Problem**

Instruction has taken another dimension, different innovative approach had been developed to

make teaching and learning pleasurable. The trend in technology has brought about new methods in instructional system; among these various methods is edutainment. Edutainment is a modern innovative in educational technology; it is an educational process which is considered as a combination of current practical and instructive teaching approach, which is built on the idea of acquiring knowledge through entertainment. It is an open method that gives room for direct skills acquisition, involves all categories of learners, and at the same time gives room for independent learning. With time teachers would be categorized based on their exposure to technology, based on interaction and observation, it has been confirmed that old teachers found technology and its operation to be cumbersome while the modern teachers found it difficult to utilise the traditional method. In the global community, the campaign is that teachers should try to utilize the modern technology to be able to sustain students in schools because the level of academic activities by younger generation is highly disappointing, due to the fact that the old method of teaching is highly prevalent. The old method is less interactive and makes students sit passively in the process of instruction. Studies had shown that a lot of science teachers hardly use fun related instructional strategies to make instruction interactive, most especially most private schools teachers still used the archaic, outdated and unstimulating strategies to teach science concept thence students' academic performance in science has nothing to write home about. It is expected that in private schools, where parents pay exorbitant fees for education, the mode of instruction should commensurate with the amount of money paid.

To have effective interactive lessons teachers of science subjects should explore every avenue available to bring technologically packed instruction to Classroom. It was believed that the use of technology for instruction could lead to the following: reduce tension for students learning science, make them to have positive attitude and interest towards chosen science oriented subjects as profession, close gap in performance among gender giving room to gender equity. The researchers aimed at finding out the extent to which instruction that is technologically packed would boost students' performance in Biology without killing their interest and cause gender inequality. To be able to get relevant data to prove these assertions, the study is titled utilizing edutainment approach in instruction to determine gender issues, students' interest and attitudinal factors in Biology in secondary school

### **Purpose of the Study**

The specific objectives included to:

Ascertain if edutainment method of teaching affect students attitude and interest towards Biology.

### **Research Question**

The following research question was formulated to guide this study:

What is the impact edutainment on students' attitude and interest towards Biology?

### **Significance of the Study**

The study will give an insight as to how edutainment method of teaching affects students' academic performance in a concept of Biology. It could be addressed to meet the competitive requirement within the educations sector and globally. Beneficiaries of these are researchers, students, teachers, and individuals.

It will help researchers on gender matters especially by ascertaining the relationship between female students than male students' academic performance in the face of innovation and at the same time serve as a reference point for further research.

The individuals and students would use this study as basis of their ambition and aspiration to embark on their desired degree courses and could be used as value added knowledge.

It would assist teachers to acquire information on how to bring new approach on board to bring about effectiveness in instructional process

### **Methodology**

The research design for the study was quasi experimental design and employed a mixed method of qualitative and quantitative design which involved two groups i.e. the control and experimental groups. The population consisted of all students of private schools in District 1 of Alimosho Local Government area of Lagos State. Purposive sampling technique was used, by selecting a private school in Abesan Estate, Ipaja, this was so because of the convenience it provided for the researchers. An intact class of 30 SS 2 students was used as the control group and another intact class of 30 SS 2 students was used as the experimental group.

The Biology achievement test was administered as the pretest before the lesson plans for edutainment and traditional approaches were used on the two groups. The same content of pre-test questions was administered to carry out a post-test on the control and experimental groups after teaching both groups separately to assess the academic

performance of the students. The instruments Biology achievement test ( $r=0.96$ ) and questionnaire.

Data collected from the questionnaires were analysed using percentage, while ANOVA was used for testing

**Results**

**Hypothesis one**

**HO<sub>1</sub>:** There is no significant difference between female and male students' academic performance in Biology when edutainment method was used.

**Research question one**

What is the impact of edutainment on students' attitude to and interest in Biology?

Table for research question on Edutainment

**Table 1: Impact of Edutainment on Attitude and Interest**

	Statement	Response	Response
1.	What is the advantage of edutainment to your study?	Very good	Not good
	Respondents	50 (83%)	10 (17%)
2.	Edutainment has helped me to remember what I learnt....	Very well	Not very well
	Respondents	42 (70%)	18 (30%)
3	Interaction with edutainment mode of instruction in class is.....	Very good	Not good
	Respondents	36 (60%)	24 (40%)
4	With edutainment in classroom, I give definition of concept in my subject.....	Very quickly	Not quickly
	Respondents	28 (47%)	32 (53%)
5	With edutainment in class, I find learning.....	Very interesting	Not interesting
	Respondents	34 (57%)	26 (43%)
6	To my learning, edutainment impacted positively to my willingness and desire to learn as a student.....	Very positive	Not positive
	Respondents	44 (73%)	16 (27%)

With the use of percentage for analysis, 83% of the students concluded that edutainment had very good advantage on their study while 17% conclude that edutainment had no impact; 70% of the student concluded that edutainment helped them remember what they learnt very well, while 30% concluded that edutainment did not help them remember well. In addition 60% of students concluded that interaction with edutainment mode of instruction in class was very good, while 40% concluded that interaction with edutainment mode of instruction was not good. Since on the average a good percentage of the students concluded that: edutainment had very good advantage on their study, edutainment helped them to learn very well, that interaction with edutainment mode of instruction in class was very good; that with

edutainment they were able to give definition of concepts in their study quickly, that with edutainment learning was very interesting and edutainment impacted very positively on their willingness and desire to learn as students. It could be concluded that edutainment method of teaching has positive impact on students' attitude and interest towards Biology

**Discussion of the Findings**

Findings from this study stated that there is no significant difference between female and male students academic performance in Biology when edutainment method is used. This shows that utilising edutainment on male and female students is highly impactful and both sexes were affected at the same rate this is supported by Sabrina and Solanki (2018)

**in their finding stated** that students achievements and attention could be better irrespective of gender if exposed to any category of instructional gadgets at whatever level. To buttress the finding of this point further Pasawano, (2014) discovered that after implementing the edutainment format, the results revealed that all issues were rated at high levels.

Another finding of the study shows that edutainment approach has impact on students' attitude and interest towards Biology. This finding is in agreement with Effiong and Igiri (2015) who stated in the finding of their study that a lot of students were willing to select new learning strategies as part of their exam strategy to read and pass their examinations. Interest is a powerful motivational process that motivates learning and guides academic and career trajectories (Renninger and Hidi 2016). Consequently with positive interest and optimum desire to acquire knowledge, learners are more relaxed, energetic, alert, responsive, and less fearful and more open to learning when they enjoy the process of learning. In a nutshell edutainment has a lot to offer instructional process, the planned activities for learners are fun oriented and highly friendly, so learners would want to do it again and again which should make teachers very happy.

### Conclusions

Since there was no significant difference between female and male students academic performance in Biology with the use of edutainment, this shows that both male and female could utilize edutainment for maximum academic benefit. The use of edutainment does not give preference to gender and edutainment encourages active participation of students irrespective of gender.

The use of edutainment would tilt students towards picking science subjects as courses to study. Edutainment is an avenue to make students look forward to learning Biology concepts which could be transferred to other science subjects.

### Recommendations

The following recommendations were made based on the result of the findings

1. Male and female students should be exposed to edutainment teaching environment.
2. Parents should assist schools to ensure that there is availability of edutainment media to their children at home and also monitor their children to utilize some readily available edutainment resources in television, radio

and educative edutainment software for learning.

3. Teachers should ensure that they integrate edutainment in addition to creating the mode of instruction that could enhance good learning outcomes in the learners.

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