EFFECTIVENESS OF SLOW-MATION PACKAGE AND POWERPOINT PRESENTATION ON ACHIEVEMENT OF PRIMARY SCHOOL PUPILS HEALTH EDUCATION

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ABSTRACT
The traditional method of teaching and learning dominate the method of learning that is prominent in Nigeria. The uses of technology for educational system enhance effective teaching learning activity. Therefore, the study investigates the effectiveness of slow-mation package and power point presentation on achievement of primary school pupils Health Education. A quasi-experimental of pre-test, post-test and control single groups design was used for the research. Sixty pupils from the two selected schools formed the sample for the study. The pupils assigned to both and were later tested with Ceramics Achievement Test for data collection. Mean and standard deviation used to test the research questions while t-test analysis used for the formulated hypotheses. A quasi-experimental design was used to determine differences in academic performance of male and female pupils as well as those in private and public school taught with slow-mation package and those taught with power point presentation. The results of the findings indicated that there was no significant difference between male and female students, there was no significant difference between private and public pupils taught with slow-mation package and those taught with power point presentation. As a result of the research, it was recommended that the State Ministry of Education should organise training for primary school teachers on the use of slow-motion and power point presentations which facilitate effective teaching and learning activity.
Keywords: Effectiveness, Slow-mation, Power-point, Health-education, Pupils

INTRODUCTION

Information Communication and Technology (ICT) involves different electronic devices used to create, disseminate, communicate, store and manage information (Ogunwale & Ojo 2007; Adomi & Kpangban, 2010; Omiola, 2011). It is an educational tool employed for the presentation of instruction to learners globally. Information Communication and Technology (ICT) equips students to continue to adapt to different technological innovations, thus extended the skill of instructors to manage, disseminate knowledge and provide new prospects for the students to enable them exposed to knowledge in diverse ways (Chai, Koh & Tsai, 2010; Hong & Songan, 2011). Information Communication and Technology (ICT) came to existence as a result of the communication revolution that teacher utilises to supplement the teaching and learning in the classroom. In essence, Gorjian, Moosavinia, Ebrahimi, Asgari and Hydarei (2011) stated that ICT is an effective medium of communication for instructional purposes, which include computers and video electronic gadgets.

Computer era in which we live, more and more frequently imposed requirements for modernization and radical changes in the implementation of the teaching process. To overcome the weakness of dominant traditional teaching, at the time of information technology, using the traditional method for teaching-learning activity become uninteresting and unpractical. Using of modernizing teaching material by the teacher will increase the students' motivation and make the lesson attractive for learning. Modern teaching aids stimulate the cognitive activity of the students in the process of acquiring knowledge. Modern educational technology with

using multimedia system create a precondition for engaging all the senses in the process of acquiring new knowledge, develop students creativity and ensures their greater class and learning participation (Dragana, & Stojan, 2018).

Studies revealed that technology has influenced the making and the presentation of instruction, it changes how both the teachers and students interact within and outside the classroom (Arinto, 2006). Therefore, Adeyemo, (2010) agreed that the influence of ICT on mankind is becoming so vital and numerous. In a nutshell, Iyeke (2011) explained that ICT has transformed the educational systems globally in the present dispensation. ICT now has potentials to enrich and engage students in positive learning.

The individual positive attitudes towards using Information Communications and Technology are widely recognized as a necessity and prerequisite condition for effective manipulation of computer in instruction. ICT has been useful and essential tools for solving problems of education globally. The integration of Information Technology in the learning space, as well as the educational environment, depends mainly on teachers' and students' attitude towards ICT usage. This is achieved through an experienced and dedicated instructor, method, instructional medium, good study environment, course of study, parents' cooperation, high-quality books and, the most important, the study habits (Robinson, 2000; Ogunlade, 2009; David, 2013).

One of the prominent instructional medium used by the teacher is Slow-motion, otherwise called stop-motion animation. It was gathered together from the word 'Slow and Animation." It is a technique of creating motion visual of technology of instruction from the stop-motion animation technology that turns the instructor in the learner's environment as the sole tutor along with learners' collective efforts. The visual which is the content in animation is played gradually, and this gives the tutor an ample opportunity to report vividly the slow-moving of visuals; pictures, images, drawings and figures. Slow-motion can be classified as a technological device, a teaching method and a process that depicts the process of clay animation.

It collaborates learners' in creative ways of producing a thorough complete researching work. This entails the process virtual information starting from collections from script writings, creating of storyboard, designing of different models. Using digital camera to take photograph, editing and printing. Production of images and creating an iMovie with good narration (Hoban, 2005; Hoban, & Ferry, 2006; Hoban, 2008).

It is an educative way of developing creativity in learners. This is done through learners exposure to digital devices to create different animations. The projected medium of instruction also takes care of the learners' challenges right from the beginning of the content delivery, during the lesson and at the summative stage of evaluation. It creates an opportunity for students to pass construct criticism on the animation as a multimodal representation to explain the specified concept and ideas (Hoban, 2008). Studies confirmed the Slow-motion as the active participation of both the learner and the instructor in the learning atmosphere. The concepts increase the rate of learner understanding. Learners play-oriented known as a conceptual play and a play-learning child's centred. A double moving method of teaching and a targeted child play. Simplify way of handling difficult educational concepts through projector device in the teaching and learning atmosphere (Ministry of Education, 2007; Pramling & Carlsson, 2008; Chaiklin & Hedegard, 2009; Fleer, 2011).

PowerPoint is a projected medium that associated and prominent with classic lectures which stimulates different topics, visualization and animation. It is the most known technology projecting device and tool meant for instructional delivery and presentations of lectures. PowerPoint presentation is one of the Information Technology used for the instructional purpose that combines visuals along with lectures which making the presentation richer and have upper hand over conventional teaching method. PowerPoint has the attribute to display colourful text, photographs, illustrations, drawings, tables and graphs in a slide with or without effects of sound for either small and large crowd. It inculcates movies and transition from one form to another like a slide show. Text can be animated and illustrated on the screen using the animation feature as well as the addition of sound to affect the narration and also print out the PowerPoint materials. Computer software such as Microsoft words is mostly used for creating presentations and summaries of content (Delwiche & Ananthanarayanan, 2004; Kapterev, 2007; Egbule, 2008; Jones, 2009; Ofili, 2015).

Nowadays, PowerPoint has become a common presentation and teaching tool in educational and professionals' settings all over the world. Although powerpoint used to be in existence for some years, it has begun to spread to schools and language classrooms. Powerpoint is a useful tool that is now being used in many classrooms. You may have years of classrooms experience as a teacher or a student which guides your teaching. However, you are less likely to have had similarly rich experiences with instructional technologies, as these tools have become available only more recently. Additionally, we are only beginning to understand the capabilities and possibilities that emerging technologies have for teaching and learning (Masoud, Masoud & Massoumeh, 2012).

PowerPoint presentation could contain pictures, large texts, graphs, sounds and other media that could make the presentation more entertaining and easier to understand. It provides the easier platform to prepare teaching portfolio presentations, lessons, conferences and articles and also assists lecturers to create perfect, safe and embedded interactive teaching and learning across various contexts to students (Looi, 2010; Mircea & Andreescu, 2011).

However, intention to use PowerPoint presentation is determined by the teachers' beliefs, attitudes and competencies. These include the ability to manipulate different types of designs, slides, animation, creating and importing pictures and clipart inserting sound effects.

Statement of the Problems

The researcher observed that the traditional method of teaching and learning dominate the method of learning that is prominent in Nigeria. It is on this note that Slow-motion package and the PowerPoint presentation will fill in the existing gap. Therefore, the extent to which the Slow-mation Package and PowerPoint presentation effect on the achievement of primary school pupils in Olorunda LGA, Osun State, Nigeria is still unknown. This study examines the effectiveness of Slow-mation Packages and PowerPoint presentation on the achievement of primary school pupils ceramics in Osogbo, the study also investigates gender influence of both the public and private primary school pupils on Slow-motion Packages and PowerPoint presentation for instruction.

Research Questions

The following research questions were postulated to guide the study:

(i)   What are the differences in the pre-test and post-test mean and achievement scores of male and female pupils taught with slow-mation package and those taught with PowerPoint presentation?

(ii)   What are the differences in the pre-test and post-test mean achievement scores of pupils in private and public school taught with Slow-mation package and those taught with PowerPoint presentation?

Hypotheses

The hypotheses formulated for the study were as follows:

(i)   There is no significant difference between mean achievement scores of male and female pupils taught with Slow-mation package and those taught with a PowerPoint presentation.

(ii)   There is no significant difference between mean achievement scores of pupils in private and public school taught with Slow-mation package and those taught with a PowerPoint presentation.

RESEARCH METHOD

The study adopted Quasi-experimental research design using a Pre-test and Post-test. Public and private primary schools in Olorunda LGA, Osun State were purposively selected for this study based on the availability of art studio and creative art teachers. Population of the study comprised of all primary school pupils in Olorunda LGA, Osun State. A sample of 60 students made up of 29 males and 31 females were involved in the study selected using the 'purposive sampling technique. An intact primary school class was randomly selected from each of the schools being classified under categories of school. The research samples were from diverse socio-cultural backgrounds that were representatives of the population.

Experiments carried out for the purpose of collecting data to be analysed and studied are carried out in the laboratory, in the field or using computer numerical models. It can also be a combination of two or three of the said techniques. The decision on the location of an experiment depends on the objectives and scope of the research (Abdul -ghani, 2014). The intact classes used for the study were assigned to the experimental and control group by balloting. The Slow-motion package and PowerPoint presentation was developed by the researcher and the slides were made up of topics on the ceramics: definition, ceramics materials, tools and equipment and the uses of ceramics. The slides were validated by three experts, one from the Department of Educational Technology from University of Ilorin, one from the Department of Health Promotion and Environmental Health Education from University of Ilorin, and one creative arts teacher. A Ceramics Achievement Test (CAT) was also developed by the researcher from the validated Common Entrance Examination (Basic Primary School Examination). The selected topics were taught with the Packages of Slow-mation package and Powerpoint presentation for four weeks of treatment after the administration of a post-test. Mean and Standard Deviation was used to answer the research questions and t-test was used for hypotheses testing at $P < 0.05$ levels of significance.

Results

The results obtained from the study were shown on the Tables 1, Table 2, Table 3 and Table4.

Research Question 1: What are the differences in the pre-test and post-test mean and achievement scores of male and female pupils taught with Slow-mation package and those taught with PowerPoint presentation?

Table 1: Mean and standard deviation of pre-test and post-test retention mean scores of male and female pupil

Variable	N	Mean Pretest	Std. Deviation	Mean Post-test	Std. Deviation	The difference in means scores
Male	29	13.17	1.802	15.67	2.25	2.50
Female	31	11.83	2.306	14.50	2.51	2.67

Table 1 revealed that the pre-test mean scores of the Slow-mation and the PowerPoint shows that the groups (male and female) are equivalent with regards to academic achievement. The result also showed that the post-test mean score of the Slow-mation group (15.67) was greater than that of the PowerPoint group (14.50). The total mean difference is 2.50. This implies that pupils taught with Slow-mation packages performed better than their counterparts who were exposed to the PowerPoint presentation.

Research Question 2: What are the differences in the pre-test and post-test mean achievement scores of pupils in private and public school taught with Slow-mation package and those taught with PowerPoint presentation?

Table 2: Mean and standard deviation of schools' scores from pre-test and post-test

Variable	N	Means Pretest	Std. Deviation	Mean Post-test	Std. Deviation	The difference in Mean scores
Private	30	15.67	2.25	15.07	2.49	.600
Public	30	12.17	2.17	15.10	2.43	-3.067.

Table 2 revealed that the Slow-mation packages had a mean retention score of 15.07 while the Powerpoint presentation group had a mean retention score of 15.10. Indicating that the Slow-motion group retained what taught better than the control group. Pupils from private school performed better than those from public school.

Hypotheses Testing

Hypothesis 1 investigated the differences between scores of male and female pupils taught with the slow-mation with those taught with powerpoint presentation.

Hypothesis 1: There are no significant differences between mean achievement scores of male and female pupils taught with Slow-motion package and those taught with a PowerPoint presentation.

To test this hypothesis, the t-test statistic was used to compare the post-test mean score of male and female pupils taught with Slow-mation package and those taught with a PowerPoint presentation. The result reported in Table 3.

Table 3: t-test analysis of the post-test achievement scores of male and female pupils taught with Slow-mation package and those taught with a PowerPoint presentation.

Variables	N	Mean	Std. Deviation	df	T	Sig. (2-tailed)	Remarked
Male	29	15.67	2.25	58	1.894	.063	Accepted
Female	31	14.50	2.52				

From table 3, the analysis indicated that t-value is 1.894 with P-value of .063 > 0.05 alpha level. This means that the null hypothesis one which states that there are no significant differences between mean achievement score of male and female pupils taught with the slow-mation package and those taught with PowerPoint presentation showed no significant difference. Hence, hypothesis one was accepted. Therefore, there was no significant difference between the mean achievement score of male and female pupils taught with the slow-motion package and those taught with a PowerPoint presentation.

Hypothesis 2 investigated the differences between scores of pupils obtained in private school with those in public school that taught with slow-mation and those taught with PowerPoint.

Hypothesis 2: There are no significant differences between mean achievement scores of pupils in private and public school taught with Slow-motion package and those taught with a PowerPoint presentation.

To test this hypothesis, the t-test statistic was used to compare the mean achievement scores of pupils in private and public school taught with Slow-mation package and those taught with a PowerPoint presentation. The result reported in Table 4.

Table 4: t-test analysis of the Post-test Achievement scores of pupils in private and public school taught with Slow-motion package and those taught with a PowerPoint presentation.

Variables	N	Mean	Std. Deviation	df	T	Sig. (2-tailed)	Remarked
Private	30	15.07	2.49	58	.053	.958	Accepted
Public	30	15.10	2.43				

From table 4, analysis established that the t-value is .053 with P-value of 0.958 greater than 0.05 alpha level. This implies that the null hypothesis two which states there are no significant differences between mean achievement scores of pupils in private and public school taught with a slow-mation package and those taught with PowerPoint presentation indicated no significant difference. Hence, hypothesis two was accepted. Therefore, there was no significant difference between mean achievement scores of pupils in private and public school taught with the slow-motion package and those taught with a PowerPoint presentation.

DISCUSSION

The Slow-mation is a multimedia tool which is capable of stimulating students' interest and motivation to learn. The outcome of the study revealed the value of using slow-mation and

PowerPoint in the teaching-learning process. Using slow-mation and PowerPoint presentation for the teaching of health education facilitate the teaching-learning process and improve the academic achievement of the pupils. The results of the study are in agreement with the study of Samantha, (2015) who revealed that Slow-motion enhances male students in addressing their misconceptions in Physical Science. The finding also shows that female students performed less than their male counterpart when taught with a PowerPoint presentation. This disagreed with the research findings of Ezekoka (2010) who discovered that female students performed better when exposed to ICT. Also, in the case of the Computer-Assisted Instructional Package. Adegoke (2011) opined that the result shows that there is no significant difference between the mean achievement scores of students taught using Computer Assisted Instructional and Conventional method. However, it is in disagreement with Umar, (2011) and Fagbemi, (2013) who asserted that gender does not affect the performance of students when taught with the computer. This could be because slow-mation and PowerPoint is a captivating media and can hold the attention of students. This agrees with the study of Gana, (2013) on CAI which revealed that students taught with the use of Computer Assisted Instructional package performed better and also Ofili, (2015) study on PowerPoint revealed that students taught with PowerPoint presentation performed and retained the concept taught better. The above result is in agreement with previous findings of Al- Sharaideh (2011), who reported that electronic devices/media have the potentials of increasing the probability that students will learn more, retain better and even improve their performance of the skills they are expected to develop. The result of the research corroborates with the finding of the research carried out by Ethan and Ekici (2014) among 49 pre-service science teachers at Pamukale University, Faculty of Education, Denizli, Turkey. The major aim of the study was to assess the views of pre-service science teachers about the slow-motion approach as a teaching method. The result of the study indicated that 72% of the pre-service teachers agree that the approach helpful in understanding the content. Seventy seven percent (77%) of the participants support that slow-motion preparation process was enjoyable and 88% of them think that this process was encouraging. Seventy five percent (75%) of the respondents found this approach as informative and 83.4% of them found the method helpful in learning. The total of 79.2% of the pre-service teachers think that the process was instructive and 87.4% of them stated that slomation approach increases the creativity. Nearly all of the participants agree that teaching of science subjects with the slow-motion technique will be better than teaching with the traditional method.

CONCLUSION AND RECOMMENDATIONS

The study conclusion indicates that there was no difference in pupils taught with the slow-mation package and those taught with power point presentation based on gender and school type (private and public). The federal government should provide an adequate supply of electricity to all primary schools in the study area to enable teachers utilize the slow-motion package and PowerPoint presentation for the teaching of health education. The state government should provide computer and projector for all primary schools in the study area to make it easy for teachers to use slow-motion and PowerPoint presentation for the teaching of health education which will increase the academic performance of learners. The state ministry of education should organized training for teachers that will equip them on how to use slow-mation and PowerPoint presentation which will bring effectiveness in their teaching and also increase the educational achievement of primary school pupils on health education.

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