

Attitudes towards instructional games on Peace Education among second year students in junior secondary schools in South-west Nigeria

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ABSTRACT

The popularity of games and their availability through both ICT and non ICT tools require the investigation of students' attitude towards the use in instructional delivery. The study therefore examined students' attitudes towards instructional games on peace education. A total of 360 students randomly selected from the six states forming the South-West geopolitical zone in Nigeria participated in each of the games after which their attitude was examined. Two instruments namely, Attitude towards Board Game Questionnaire and Attitude towards Computer Game Questionnaire with reliability coefficient of 0.73 and 0.75 respectively were used to collect data. Data were analyzed using mean, Pearson product moment correlation and t-test. The results revealed: (i) students' positive attitude towards the instructional games (ii) significant relationship between students' attitudes towards the instructional games and their achievement in peace education (iii) significant difference in students' attitude towards the games based on gender. The study recommended: (a) the use of instructional games for learning (b) provision of necessary facilities needed for the use of game-based strategy in instructional delivery (c) training of teachers to develop and use game-based strategy in the teaching-learning process (d) designing of gender neutral instructional games.

Keywords: Traditional method, Instructional game, Peace education, Social studies curriculum.

INTRODUCTION

The prevalence of conflicts in all human societies has been a source of global concern. Conflicts are inimical to the growth and development of humanity. Hence, the need to eradicate or minimize the occurrence at all levels of human interaction cannot be underestimated. Nigeria as a country is beclouded with conflicts in all facets of her nationhood which have equally resulted in under development manifesting in terms of political, economic and social instabilities. Adewale and Bamise (2015) assert the prevalence of conflicts in Nigeria resulting in loss of lives and properties and cumulating into unwillingness of both local and foreign investors to invest in the country. The authors citing Igbinijesu (2013) attribute conflict in the country to tribalism, struggle for resource control, religion, land and trade related disputes.

Attesting to the issue of conflict situation in Nigeria, Ayuk, Emeka, Chibuzo and Omono (2013) report that conflicts and crimes occur on daily basis in the country while Afegbua (2014) affirms that the country is entangled in ethnic, sectional, religious and political violence that have impacted negatively on her social, economic and political development. The scholar posits that conflicts in the country have resulted in loss of lives and properties which has brought untold sorrow to many people.

The need to save humanity from the devastating effects of conflicts led to the drive to implant peace into the minds of people across the globe through the instrumentally of peace education. The National Council of Educational Research and Training (2006) as cited in Ofojebe (2014) submits that peace education is not a mere training for livelihood but the inculcation of values,

skills and attitudes that will propel the individuals into living in harmony with others as responsible and responsive citizens. Ibrahim (2011) views peace education as the transformation of the mind based on the acquisition of relevant skills, values and attitudes necessary for the learners to seek and maintain peace.

The role of social studies in developing citizens that will contribute positively towards the advancement of humanity necessitated the incorporation of peace education in the junior secondary school curriculum in Nigeria. However, the continuous manifestation of both violence and non violence conflicts in the country could be attributed to non utilization of relevant instructional strategy in the teaching and learning of peace education. Adesina (2012) citing NTI (2009) acknowledges non effective utilization of student-centered learning methods in social studies classroom. This goes in line with the postulation of Edinyang and Ubi (2012) who identify lack of the use of inspiring teaching method in the teaching of social studies on which platform the teaching of peace education lies. Ibrahim (2011) advocates the adoption of methods that will demonstrate the values and principles of peace in teaching and learning of peace education. Attempt at facilitating the learning of peace education via student centred instructional strategy prompted the design of instructional games in this study.

Adeyemi and Ajibade (2011) quoting Wikipedia (2008) define a game as a structured or semi-structured activity usually undertaken for enjoyment but sometimes also used as an educational tool. Adesoji (2008) submits that learning requires children's motivation which could be in form of intrinsic goals, extrinsic rewards or psychological factors. These will make the use of instructional games relevant in the teaching-learning process. Prensky (2001a) identifies factors such as: rules; goals or objectives; outcomes and feedback; conflicts, competition, challenges and opposition; interaction and representation as attributes of games. The scholar posits that conflicts, competition, challenges and opposition are problems in game which one tries to solve through interaction with others. These attributes of games make them relevant in grooming young ones to imbibe the culture of collectivity in solving social challenges and enhancing peaceful coexistence in our society.

In the views of Ndirika (2013), the use of games in instruction is anchored on the need to make learning meaningful to the learners, create learning culture that goes in line with the interest of the learners and promote activity based learning. The scholar posits that game-based learning takes care of different learning styles, increases learning and the learners' memory capacities, improves problem-solving ability and creativity of the learners amongst other inherent benefits. Stathakis (2016) posits that game playing has the capability of enhancing students' comprehension of new concept or idea. The scholar states that critical thinking skills, creativity, teamwork and good sportsmanship can be acquired through game. Studies have also shown the efficacy of instructional games in promoting learning. Fakokunde (2006) finds significant effects of instructional games on students learning outcomes in social studies which Adeyemi and Ajibade (2011) also buttress. Sowunmi and Aladejana (2013) reveal the effectiveness of simulation games on primary school pupils' performance in primary science while Watson, Mong and Harris (2011) citing Cankaya and Karamete (2009) also reveal improved students' performance in mathematics based on the use instructional games. Olatoye, Nleya and Collia (2014) identify improvement in students' performance in English Language vocabulary building when exposed to game.

The efficacy of instructional games in enhancing students' academic performance and promoting the attitude and skills of cooperation, and problem solving led to the development of both board and computer based instructional games on peace education in this study. The two types of games were developed so as to allow for differentiation of instruction premised on the facts that computer literacy skills is still low among the students and some schools are not having facilities for the use of computer. Though, both games have the same content on peace education.

The role of the learners in the teaching-learning environment requires an investigation of their attitude towards any instructional strategy to be adopted since this could determine their acceptance of the strategy and its success thereby making the investigation of students' attitude towards the instructional games developed in this study a necessity.

Attitude according to Eagly and Chaiken (1993) is a psychological tendency that is expressed based on an evaluation of a specific entity with some degree of favour or disfavour. Schwarz and Bohner (2001) posit that attitude is usually viewed as a disposition or tendency to respond positively or negatively towards a thing such as idea, object, person or situation premised on experience. Singh (2011) defines attitude as a tendency to react positively or negatively to a person or circumstances. In the view of Azuka and Awogbemi (2012), games can facilitate students' attitude and achievement in different subject areas. The concept of attitude as viewed by scholars implies that the way students feel about any instruction strategy will determine their willingness to learn through the use. However, the gender of the learner can be a major determinant of his or her attitude towards the acceptance of any instructional strategy.

Studies have shown that gender may be a key factor in determining the readiness to use instructional games by students. According to Roig and Hurtado (2004), both boys and girls prefer games that represent the character and roles traditionally attached to their gender. The scholars assert that boys prefer games that have sport, strategy, graphic and adventure as themes while girls are inclined to educational/curriculum games, drawing tools and games with well-known character. The study of Boyle and Connolly (2009) shows that males are more committed to computer game than females in terms of frequency of play and time spent. The authors therefore advocate that learning methods and materials should be gender neutral. Regan (2012) submits that educational games can enhance learning but also identifies difference in gender preference for educational games in favour of males.

The influence of attitude and gender on the acceptance and use of games in the teaching-learning process requires their investigation in this study

Statement of the Problem

The incorporation of peace education in to junior secondary schools curriculum in Nigeria aims at inculcating knowledge, skills and attitude that will prevent or minimize conflicts in the country and promoting peaceful coexistence among her citizens. However, the prevalence of conflicts in all parts of the country coupled with the devastating effects on the economic, social, political, religious and overall image of the country has shown the failure of peace education in school curriculum to achieve its desired objectives. This could be attributed to the use of inappropriate instructional strategy in the teaching-learning process as identified by Falade, Adeyemi and Olowo (2011) that the conventional method of instruction used in Nigerian school encourages rote learning and therefore not appropriate for the development of the required values, attitudes and skills necessary for building the culture of peace in the learners. This postulation lays credence to Akudolu (2006) who affirmed lack of opportunity for learners to engage in activities that can inculcate peace-making skills in them.

The attribute of instructional games in promoting active learning and developing the skills of competition and cooperation which are needed for peaceful coexistence in human communities necessitated the design and development of both board and computer based instructional games in this study. Also, the need to examine students' disposition towards them which will determine their willingness to accept the strategy and ability to achieve the desired ends necessitated an investigation of junior secondary school students' attitude towards the instructional games.

Research Questions

1. What is the attitude of junior secondary school students towards the use of instructional board game on peace education?
2. What is the attitude of junior secondary school students towards the use of computer-based instructional game on peace education?

Hypotheses

1. There is no significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through board game and their achievement in peace education aspect of social studies curriculum.
2. There is no significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through computer-game and their achievement in peace education aspect of social studies curriculum.
3. There is no significant difference in the attitude towards the use of board game between male and female students.
4. There is no significant difference in the attitude towards the use of computer-game between male and female students.

METHODOLOGY

This is mainly a descriptive study that was conducted to determine second year Junior Secondary School students' attitude towards instructional games (board and computer games) on peace education. It was anticipated that this study was best undertaken with the use of questionnaire survey techniques.

A total of 360 Junior Secondary School II students participated in responding to questionnaire on students' attitude towards board game. Schools without enough necessary facilities for the use of computer based instructional strategy were purposively selected while the participants were randomly selected using simple random sampling technique from the six states (60 from each state) forming the South-West geopolitical zone in Nigeria. Similarly, a total of 360 students participated in learning peace education through computer game which was designed and validated by the authors. The students were selected from each of the six states representing South-West geopolitical zone in Nigeria as well. Only junior secondary school II students were selected because the theme incorporated in the games is in their curriculum. Schools with computer laboratory and a minimum of thirty functioning computer systems were used for the computer based games while schools with less than 30 working computers were used for the board game. Students selected were those without prior knowledge of the use of games for instruction. The subject teachers in each of the selected schools served as research assistant. The teachers were trained on how to play the games for a period of one week. Having ascertained their mastery of the games, the research assistants were allowed to train and monitor the participants interacting with the game for a period of 6 weeks.

The instruments used for data collection were self-developed questionnaires on students' attitude towards instructional board game and students' attitude towards computer-based game. The instruments were given to an expert in social studies education at university level and two social studies teachers at secondary school level for face and content validity. The instruments were

further given to two educational technologists who are experts in designing instructional games to ascertain the relevance of the instrument in assessing students' attitude towards the games. Each of the questionnaires was made up of 10 items placed alongside a four-point Likert Scale of Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD) so as to streamline the options in line with the ability of the students who are just in their second year of secondary education. Each of the instruments was also administered to 60 students that have been exposed to each of the games during the process of trial-testing. Their responses were analyzed using Cronbach alpha analysis. Reliability coefficients of 0.73 and 0.75 were obtained for the computer-based game and the board game respectively. Data were analysed using percentage, mean and standard deviation, Pearson Product Moment Correlation and t-test.

RESULTS

Answering the Research Questions

1. What is the attitude of junior secondary school students towards the use of instruction board game on peace education?

Table 1: Attitude of Students towards Instructional Board Game

S/N	VARIABLES	SD n (%)	D n (%)	A n (%)	SA n (%)	MEAN	S.D
1	It is easy to learn through the game	6(1.7)	7(1.9)	142(39.4)	205(56.9)	3.517	.624
2	Using the game will encourage students to learn peace education	3(0.8)	25(6.9)	109(30.2)	223(61.9)	3.533	.663
3	I can work on my own by making use of the game	28(7.8)	28(7.8)	138(38.3)	166(46.1)	3.228	.895
4	Playing the game is interesting	7(1.9)	15(4.2)	138(38.3)	200(55.6)	3.475	.671
5	It is easy to play the game	22(6.1)	31(8.6)	97(26.9)	210(58.3)	3.375	.881
6	Playing the game encourages me to learn	9(2.5)	18(5.0)	127(35.3)	206(57.2)	3.472	.708
7	The information presented on the game cards can easily be understood	6(1.7)	22(6.1)	116(32.2)	216(60.0)	3.506	.688
8	The game makes social studies class interesting when learning peace education	9(2.5)	41(11.4)	94(26.1)	216(60.0)	3.436	.791
9	I am in support of using the game for learning social studies	12(3.3)	31(8.6)	77(21.4)	240(66.7)	3.514	.789
10	The questions in the game enable me to remember the peace education content.	3(0.8)	34(9.4)	96(26.7)	227(63.1)	3.519	.699
	Cluster Mean					3.603	

Table 1 shows the analysis of Junior Secondary school students' attitude towards the use of instruction board game on peace education. It shows that 96.3% of the respondents agreed that it is easy to learn through the game, 92.1% agreed that using the game encourages students to learn peace education, 84.4% agreed that they can work on their own by making use of the game, 93.9% agreed that playing the game is very interesting, 85.2% agreed that it is easy to play the game, 92.5% agreed that playing the game encourages them to learn, 92.2% of the

students said that the information presented on the game cards can easily be understood, 86.1% agreed that the game makes social studies class interesting when learning peace education, 88.1% agreed that they are in support of using the game for learning social studies, 89.8% posited that the questions in the game enable them to remember the peace education content. The cluster average of 3.6 obtained shows that the respondents are positively disposed to the use of the instructional board game.

2. What is the attitude of junior secondary school students towards the use of computer-based instructional game on peace education?

Table 2: Attitude of Students towards the Computer-Based Instructional Game

S/N	Variables	SD n (%)	D n (%)	A n (%)	SA n (%)	MEAN	S.D
1	It is easy to learn through the game	20(5.6)	3(0.8)	77(21.4)	260(72.2)	3.603	.779
2	Using the game will encourage students to learn peace education	3(0.8)	29(8.1)	83(23.1)	245(68.1)	3.583	.675
3	I can work on my own by making use of the game	29(8.1)	26(7.2)	61(7.2)	244(67.8)	3.444	.937
4	Playing the game is interesting	18(5.0)	27(7.5)	65(18.1)	250(69.4)	3.519	.838
5	It is easy to play the game	9(2.5)	26(7.2)	56(15.6)	269(74.7)	3.625	.728
6	Playing the game encourages me to learn	17(4.7)	9(2.5)	56(15.6)	278(77.2)	3.653	.749
7	It is easy to understand the information presented in the game	3(0.8)	34(9.4)	49(13.6)	274(76.1)	3.650	.684
8	It is easy for me to know if the answer chosen to a question is right or wrong	18(5.0)	10(2.8)	57(15.8)	275(76.4)	3.636	.767
9	I am in support of using the game for learning peace education	7(1.9)	16(4.4)	55(15.3)	282(78.3)	3.700	.646
10	The use of the game will make social studies class interesting when learning peace education	3(0.8)	21(5.8)	77(21.4)	259(71.9)	3.644	.630
	Cluster Mean						3.375

Table 2 shows the analysis of Junior Secondary school students' attitude towards the use of computer-based instructional game on peace education. It shows that 93.6% of the respondents agreed that it is easy to learn through the game, 91.2% agreed that the game will encourage students to learn peace education, 75% agreed that they can work on their own using the game, 87.5% agreed that playing the game is interesting, 90.3% agreed that it is easy to play the game, 92.8% posited that playing the game encourages them to learn, 89.7% agreed that it is easy to understand the information presented in the game, 92.2% agreed that it is easy for them to know if the answer chosen to a question is wrong or right, 93.6% supported the use of the game for learning peace education, 93.3% agreed that the use of the game will make social studies class interesting when learning peace education. The cluster average of 3.4 obtained shows students' positive attitude towards the use of the game.

Hypotheses

H₀₁: There is no significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through board game and their achievement in peace education aspect of social studies curriculum.

Table 3: Summary of Pearson Product Moment Correlation Coefficient computed for significant relationship between Junior Secondary school students' attitudes towards learning through board game and their achievement in peace education aspect of social studies curriculum.

Variable	N	X	S.D.	r	p
Students' attitude on board game	360	3.517	0.624		
Students' achievement in peace Education	360	3.533	0.663	0.564*	0.000

* significance at $P < 0.05$

The result in Table 3 reveals that r value of 0.564 is greater than that of p value of 0.000 which implies that there is significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through board game and their achievement in peace education aspect of social studies curriculum. The students' positive attitude towards the instructional board game impacted positively on their achievement in peace education. Therefore, the null hypothesis is rejected.

H₀₂: There is no significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through computer-game and their achievement in peace education aspect of social studies curriculum.

Table 4: Summary of Pearson Product Moment Correlation Coefficient computed for significant relationship between Junior Secondary school students' attitudes towards learning through computer-game and their achievement in peace education aspect of social studies curriculum.

Variable	N	X	S.D	r	p
Students' attitude on computer-game	360	3.625	0.728		
Students' achievement in peace Education	360	3.636	0.767	0.373*	0.000

*significance at $P < 0.05$

The result in table 4 reveals that r value of 0.564 is greater than that of p value of 0.000. This result implies that there is a significant relationship between Nigerian Junior Secondary school students' attitudes towards learning through computer-based game and their achievement in peace education aspect of social studies curriculum. The positive disposition of the students towards the use of the instructional game enhanced their academic achievement in peace education. Therefore, the null hypothesis is rejected.

H_{o3}: There is no significant difference in attitude towards the use of board game between male and female students.

Table 5: Summary of t-test Analysis of difference in attitude towards the use of board game between male and female students.

Perception	N	X	SD	DF	t	Sig.	Remark
Male Students	149	3.436	0.738	358	2.063	.040	Significant
Female Students	211	3.574	0.524				

*Significant at P<0.05

Table 5 shows that there is significant difference in attitude towards the use of board game between male and female students (t=2.063, df = 358, p<0.05). This implies that male students' attitude towards the use of board game differs from their female counterpart. Hence, the null hypothesis is rejected.

H_{o4}: There is no significant difference in attitude towards the use of computer-game between male and female students.

Table 6: Summary of t-test Analysis of difference in attitude towards the use of computer-game between male and female students.

Perception	N	X	SD	DF	t	Sig.	Remark
Male Students	169	3.396	0.977	358	4.944*	.000	Significant
Female Students	191	3.785	0.448				

*Significant at P<0.05

Table 6 shows that there is significant difference in attitude towards the use of computer-game between male and female students (t=4.944, df = 358, p<0.05). This implies that male students' attitude towards the use of computer-game differ from their female counterpart. Hence, the null hypothesis is rejected.

DISCUSSION OF FINDINGS

The study shows that students are positively disposed to the use of both the board and computer-based instructional games for learning peace education and social studies as a subject in the school curriculum. The students' positive attitude towards the games could be attributed to the qualities inherent in games which make students to collaborate and cooperate coupled with the opportunity of learning in threat free environment. The improved students' academic performance and positive attitude towards the use of the game lay credence to the postulation of scholars such as Prensky (2001a), Fakokunde (2006), Edinyang And Ubi (2012), Azuka and Awogbemi (2012) Sowunmi and Aladejana (2013), Olatoye, Nleya and Collia (2014) and Stathakis (2016) which

have asserted the effectiveness of instructional games on students' academic achievement in different subject areas coupled with positive inclination of students towards games. The study also revealed that there is significant difference in students' attitude towards the instructional games based on gender though both boys and girls are positively disposed to them. The difference in the attitude based on gender conforms to the findings of Boyle and Connolly (2009), Regan (2012) and Roig and Hurtado (2014).

RECOMMENDATIONS

Based on the findings, the following recommendations are made.

1. The use of instructional game strategy should be encouraged in learning peace education since students have positive attitude towards it.
2. Necessary facilities needed for the use of game-based strategy in instructional delivery should be encouraged.
3. Teachers should be trained on the development and use on game-based strategy in the teaching-learning process.
4. Instructional games designers should endeavour to develop games that are gender neutral in terms of attitude and academic performance.

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