

Spontaneous Collaborative Group Approach and REFLECT as Teaching Strategies for the Improvement of Pupils' Attitudes toward HIV/AIDS Education

Oludola Sarah Sopekan

Department of Arts and Social Sciences Education, Faculty of Education, University of Lagos, Nigeria
E-mail of the corresponding author: sopekansarah@yahoo.co.uk

Abstract

This study investigated the effects of two participatory teaching strategies (Spontaneous Collaboration Group Approach, (SCGA) and Regenerated Freirean Literacy through Empowering Community Techniques (REFLECT)) on pupils' attitudes toward HIV/AIDS Education in Ogun State, Nigeria within the blueprint of a pretest posttest non-randomised control group quasi-experimental design. Combination of cluster and simple random sampling techniques were used to select one intact class each from nine public primary schools and the sample consisted of three hundred and ninety-nine (N=399) pupils. Two instruments were developed and used for data collection namely: Pupils' HIV/AIDS Education Attitude Questionnaire (PHAEAQ, $r = 0.79$) and Academic Ability Test (AAT, $r = 0.71$). Three research questions were raised and tested and data collected were analyzed using analysis of covariance at 0.05 level of significance. The result revealed that participatory teaching strategies were appropriate in enhancing pupils' attitudes toward HIV/AIDS education and the choice of appropriate instructional strategies could change the attitude of pupils about HIV/AIDS and consequently, make them to be aware of the evil effects of the disease. It was therefore recommended that REFLECT and spontaneous collaboration group approaches should be adopted in teaching HIV/AIDS-related issues in primary schools.

Keywords: participatory instructional strategies, HIV/AIDS education, pupils' attitudes

1. Introduction

HIV/AIDS is one of the most challenging health problems in Nigeria and the world at large despite various awareness programmes. This may be attributed to low correlation between knowledge and attitude of Nigerian youth towards HIV/AIDS education. Although, the federal government of Nigeria and various non-governmental organizations have made some efforts aimed at attacking early childhood diseases and alleviating poverty, the provision of Universal Basic Education for all children of school going age is a right step in the right direction. School subjects such as English Studies, Social Studies and Basic Science and Technology are among the core subjects, through which HIV/AIDS education is being taught in Nigerian primary schools. This is supplemented with various awareness programmes on Radio and Television by the three tiers of government. It is daunting to note that most researches on HIV/AIDS in Nigeria have been concentrated on secondary and tertiary levels of education (Olagunju, Busari & Ogunbiyi, 2004) with little or no research effort channeled to the primary level. It is evident that a good quality education is one of the key defenses against HIV/AIDS (USAID, 2007) and primary education remains the bedrock of formal education. Busari, Olagunju and Duyilemi (2005) advocate different training scheme for specified professional and extensive use of low-cost media resources within communities in increasing the knowledge and improving their practices of HIV/AIDS. Feist and Feist (2006) found that the early adolescence which begins with puberty, from 10 – 14 years is a time when enduring patterns of healthy behaviours can be established. Established healthy patterns through participatory teaching strategies from the start are easier than changing behaviors already entrenched. It also helps in postponing the onset of sexual activity, a situation which can quell the spread of HIV/AIDS, especially among youths. It is vital to recognize and support the role of teachers in carrying out HIV/AIDS education. They require support in gaining skills to promote participatory non-gender sensitive and right-based approaches to HIV/AIDS.

This is because attitudes and behaviours taught and learned in school serve as examples for beyond classrooms. As observed by Bennell and Swainson (2002), HIV/AIDS education needs to start from when children enter school and this can be achieved scientifically by adopting simple participatory teaching strategies such as Spontaneous Collaboration Group Approach and Regenerated Freirean Literacy through Empowering Community Techniques (REFLECT). These strategies are yet to be tried on primary school pupils in Nigeria despite the enormous advantages inherent in their use. Participatory teaching strategies improve self-esteem, produce better attitude towards the school subjects, the classroom, the school and they improve time on task (Adedigba, 2004).

Steps involved in REFLECT are:

- (i) Identification of issue/ problem: That is sickness in the family
- (ii) Analysis and Discussion: Learners figure out what type of sickness, what are the symptoms, what can be used in terms of medication.
- (iii) Planning and Action: Have one to three plans of action, after executing the first and there is no solution, try the second, before the second is exhausted there is going to be a solution, if not use the third plan.
- (iv) Linking participatory learning: Sensitize learners to their problem; let them voice them out and then proffer solutions.
- (v) Supplementary learning material: Use of other learning materials such as games, drama playlets, songs or films.
- (vi) Additional learning: Give them assignments, further reading, reference, or ask their own opinion about the topic.

Spontaneous Collaboration Group Approach

This involved collaboration in which pupils divided into groups are expected to work individually on the same problem but they can join in and help one another. The pupils will provide individual answers later. But when pupils engage in a group work on the same problem, it is possible for them to contribute to one another's interest and understanding. This may influence their action, ideas and the quality of the end-product.

Steps involved in Spontaneous Collaborative Group Approach

These steps were designed by Adedigba (2004) and modified by the researcher. They are:

- (A) **Teacher's Preliminary Activities:** This involved the following steps:
 - (i) Dividing the pupils in groups using simple balloting.
 - (ii) Assigning position to each group by balloting and directing them to work and find solution to the problem individually.
 - (iii) Directing the pupils to join in and help one another when the need arises.
 - (iv) Instructing them to look for reference to solve the problem.
 - (v) Directing them to select a leader to co-ordinate and organize other members of the group.
 - (vi) Directing them to submit solution during the next lesson period.
- (B) **Student's Individual Activities:** This involved individual pupils carrying-out the following activities:-
 - (i) Each member of a group worked individually to find solution to the same problem.
 - (ii) Each member of a group consulted other members instead of their teacher for necessary assistance and solutions to problems.
- (C) **Students Group/Teacher Activities:** This stage involved both the students and teacher performing the following duties:-
 - (i) Group members helped one another to solve their problems in the course of finding solution to their individual problems.
 - (ii) Teacher monitored them to ensure that they join in and help other group members to solve their problems.
 - (iii) Teacher makes the classroom environment conducive for individual group members to present their solution to the class.
 - (iv) Group members to present their solution to the class will be invited by the teacher to occupy the front seats and present their solutions to the class.
 - (v) Each member of group was given time to present his/her solution to the class. The other group members that constituted the class will be allowed to react and ask questions.
 - (vi) The teacher and the class listened, took note and asked questions from the member presenting their solution.
 - (vii) The teacher mediated in solving any conflict that occurred when members or groups expressed their differences without associating with any group.
- (D) **Concluding Stage:** This stage involved the following steps:
 - (i) Copies of the individual group member's presentation were made available to the class to form their reading materials.
 - (ii) The teacher is also given a copy of the individual solution to be used later.
 - (iii) Each pupil's score in the evaluation was regarded as individual pupils' score and not group score.

Conventional method: Is the method of teaching where by the teacher dominates the class activities. It is a

traditional method.

- (i) The teacher introduces the lesson by asking questions on previous knowledge.
- (ii) Teacher explains the new topic.
- (iii) Teacher demonstrates the topic with relevant concrete object.
- (iv) Teacher writes notes for the pupils on the chalkboard.
- (v) Teacher asks questions on the concept.

Besides, there is the assertion that academic ability has significant effect on pupils' attitude in school subjects (Akinbote, 1993; Ajitoni, 2003; Adedigba, 2004). Experts further stressed that teachers should take cognizance of the academic abilities of individual pupils in the classroom. This is particularly necessary since the primary school is the foundation on which other learning stages stand. Based on the foregoing, further research is therefore necessary to investigate whether academic ability could influence pupils' attitude towards HIV/AIDS.

The following research questions were investigated:

1. Will there be a significant difference among pupils exposed to the three different strategies in their attitude towards HIV/AIDS Education?
2. Will there be a significant difference among pupils with high, medium and low academic ability in their attitude towards HIV/AIDS Education?
3. Will there be an interaction effect of treatment and academic ability of the pupils on their attitude towards HIV/AIDS education?

2. Method

This study adopted a pretest posttest non-randomised control group quasi experimental design. It utilized the combination of cluster of areas and simple random sampling techniques. The researcher picked the sample from the cluster of HIV prevalence areas in Ogun State, Nigeria. These areas were selected because of the presence of truck drivers, foreign visitor and prostitutes who according to findings, could spread HIV infection. Nine schools and 399 pupils were used. The choice of primary five and six pupils was made because they had been exposed to marriage and pre-marital sex education in their social studies classes.

The selection of school was based on the following criteria:

- (i) Pupils' primary school with at least 15years of existence.
- (ii) Co-educational school.
- (iii) Availability of experienced social studies teachers.
- (iv) Willingness of the required teachers to participate in the study.
- (v) Evidence of primary five and six pupils of the schools having been exposed to topics in Nigerian culture and pre-marital sex in their social studies classes.

Two instruments were developed for the purpose of data collection: Pupils' HIV/AIDS education attitude questionnaire (PHAEAQ, $r = 0.79$) and academic ability test (AAT, $r = 0.71$). The scores of pupils in academic ability test were used to place pupils in different ability groups (low, average, and high). Also, the scores of the pupils in PHAEAQ were obtained before and after the treatment sessions in the two experimental groups and control group. The teachers' instruction guides were constructed by the researcher for all the groups (Experimental & control groups). These were to guide the teacher during their lessons. The last instrument, Assessment Sheet for Evaluation of Teacher Performance (ASETP) was used to evaluate the performance of the participating teacher based on the procedures for implementing participatory teaching strategies appropriate for their respective group. Participating teachers and research assistance were trained for one week. The pre-test was administered before teaching commenced and post-test was administered after the teaching. Treatment in each group lasted six weeks. Each lesson lasted 40minutes duration per week with one lesson per week in each class. In line with national research guidelines, ethics approval was sought and given with parental consent and each young person's assent. Data collected were analyzed using analyses of covariance (ANCOVA) and multiple classification analysis (MCA) was used to determine the magnitude of the achievement of pupils in various groups. Scheffe's post-hoc was used where significant main effect was obtained. All the research questions were tested at $p < 0.05$ level of significance.

3. Result

Research question One: Will there be a significant difference among pupils exposed to the three different strategies in their attitude towards HIV/AIDS education?

Table 1: Summary of Analysis of Covariance on pupils' Attitude toward HIV/AIDS Education by Treatment and Academic Ability

Source	Sum of squares	Df	Mean squares	F	Sig
Covariates (pre-test)	48.345	1	48.345	.982	.322
Main Effect (combined)	2659.657	5	531.931	10.799	.000
Treatment	2521.686	2	1260.843	25.598*	.000
Academic Ability	214.938	2	107.469	2.182	.114
Treatment * Academic Ability	496.286	4	124.071	2.519*	.041
Model	3670.661	18	203.926	4.140	.000
Residual	18716.978	380	49.255		
Total	22387.639	398	56.250		

*significant at $p < .05$

Table 1 showed that there was a significant difference among the treatment groups in their attitude towards HIV/AIDS education ($F(2, 380) = 25.598$; $p < 0.05$). Table 2 below showed the magnitude of attitudinal score across the groups.

Table 2. Multiple Classification Analysis on Pupils' Attitude towards HIV/AIDS Education [Grand mean = 75.03]

Variable	N	Unadjusted deviation	Eta	Adjusted deviation	Beta
TREATMENT					
REFLECT	133	3.02		3.10	
Spontaneous Collaborative	133	-3.04	.331	-3.10	.338
Control	133	2.26		-4.77	
Academic Ability					
Low	134	-.93		-1.35	
Medium	126	.67	.091	-.75	.128
High	136	.29		.62	
R = .328 ; $R^2 = .121$					

Table 2 showed that pupils exposed to REFLECT had the highest attitude mean score ($M = 78.13$) followed by those exposed to Spontaneous Collaborative ($M = 71.93$) while those exposed to conventional method scored least ($M = 70.26$). Table 3 below showed the source(s) of the significant difference.

TABLE 3: Scheffe's Post-Hoc Test on Attitude towards HIV/AIDS Education

Treatment	Mean	Control	Spontaneous Collaborative	REFLECT
Control	70.26		*	*
Spontaneous Collaborative	71.93	*		*
REFLECT	78.13	*	*	

*pairs significant at $p < .05$

Table 3 showed that the significant main effect of treatment exposed by Table 1 was as a result of the difference between:

- Exp Group 1 (REFLECT) and Control
- Exp Group II (Spontaneous Collaborative) and Control
- Exp Group 1 (REFLECT) and Exp Group II (Spontaneous Collaborative)

This implied that REFLECT significantly improved pupils' attitude toward HIV/AIDS education than Spontaneous Collaborative and conventional methods and that Spontaneous Collaborative was also better than conventional method in improving pupils attitude toward HIV/AIDS education.

Research Question 2: Will there be a significant difference among pupils with high, medium and low academic ability in their attitude across the three groups?

Table 1 showed that there was no significant main effect of academic ability on pupils' attitude towards HIV/AIDS education ($F(2, 380) = 2.182$; $p > 0.05$). This implied that there was no significant difference among the

pupils with high (Mean=75.65), medium (Mean=74.28), and low academic ability (Mean=73.68) in their attitude towards HIV/AIDS education.

Research Question 3: Will there be an interaction effect of treatment and academic ability on pupils' attitude towards HIV/AIDS education?

Table 1 showed that there was a significant interaction effect of treatment and academic ability on pupils attitude towards HIV/AIDS ($F_{(4,380)}=2.519$; $p<0.05$). Figure 1 showed the type of interaction effect.

Table 1 showed that there was a significant interaction effect of treatment and academic ability on pupils attitude towards HIV/AIDS ($F_{(4,380)}=2.519$; $p<0.05$). Figure 1 showed the type of interaction effect.

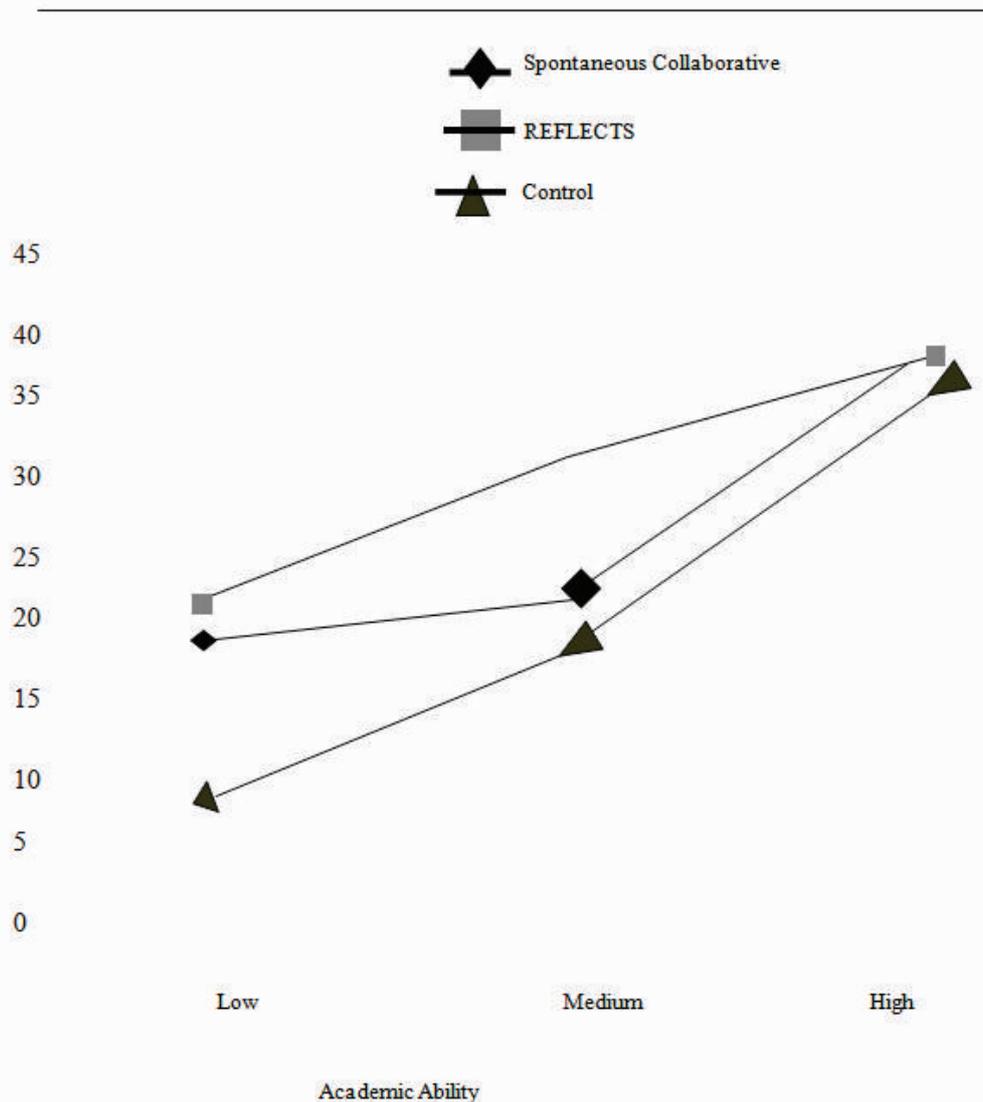


Figure 1. Interaction Effect of treatment and academic ability

The line graph showed that the interaction effect of treatment and academic ability was ordinal. This implied that in Spontaneous Collaborative Group Approach, REFLECTS and Conventional groups, those students with high academic ability had the highest score, followed by those with average academic ability and the low academic ability pupils scored the least.

4. Discussion

The study found that the effect of treatment on pupils' attitude towards HIV/AIDS education was significant. The results indicated that pupils' attitude towards HIV/AIDS was greatly improved when they were exposed to the teaching strategies of REFLECT and Spontaneous Collaboration when compared with the conventional method. REFLECT affected attitude toward HIV/AIDS most and this was followed by the Spontaneous Collaboration

approach. These findings support the submission and findings of some other researchers that have used these approaches. REFLECT makes teaching and learning more real and functional (Jurmo, 1987; Freire, 1993). Hart (1989) opines that in Spontaneous Collaborative group work, activities are directed by pupils themselves and were often associated with getting help for individual work rather than shared tasks. The study also found that the conventional chalk-and-talk method (Awofala, Arigbabu, & Awofala, 2013) was also capable of affecting learners' attitudes and memories but not as much as when the learners fully participated in construction of the knowledge (Adedigba, 2004; Johnson & Johnson, 1999). Earlier findings had associated improved learning outcomes such as attitude towards content learning and achievement to learner-centred teaching strategies (Awofala, *etal.*, 2013; Awofala & Nneji, 2012; Awofala, Fatade, & Ola-Oluwa, 2012; Awofala, 2011; Akay & Boz, 2010; Akinsola & Awofala, 2009; Akinsola & Awofala, 2008). The traditional teaching method had not only been criticized for emphasizing teacher activity at the expense of pupil involvement (Awofala, *etal.*, 2013) but that it had a negative effect on students' attitudes (Akay & Boz, 2010).

The present study findings could be as a result of the fact that the REFLECT strategy made not only the teaching/learning process practical, but also what the pupils learnt were made real and of concern to them. Thus, the teaching/learning was made more functional. This type of teaching approach was capable of arousing the interest of the learners and maintaining it for longer period which in turn would add more to their memory. When the interest is developed and maintained, their attitude would be maximally increased. In the case of Spontaneous Collaborative Group Approach, pupils were adequately involved in the teaching/learning process. This gave room for pupils to construct their own knowledge, most especially when the pupils direct the discussion. This strategy was also better than when the learners were passive in the teaching learning process. Thus, the result was that, the three strategies affected pupils' attitude to HIV/AIDS education. REFLECT affected most, followed by Spontaneous Collaborative Group Approach while conventional strategy group was the least. This study found out that the pupils with high academic ability recorded strongest attitudes toward HIV/AIDS education followed by those with medium academic ability and those with low academic ability recorded the least. But these differences in attitude towards HIV/AIDS education among the three ability groups did not reach statistical significance. This finding supported the findings of some scholars (Johnson & Johnson, 1994; Slavin, 1995) that when group members have heterogeneous academic ability, the pupils with low ability would gain more academically. For the pupils with low academic ability to perform at par with their counterparts with medium and high academic ability could be as a result of the fact that they were able to learn by doing and observing-psychomotor and affectively than obstructive thinking which dictates the level of academic ability.

The significant interaction effect of treatment and ability level recorded in this study showed that ability level seemed to interact with instruction to produce results, meaning that the treatment conditions did discriminate across ability level in this study. The significant interaction effect of treatment and ability level recorded in this study showed that the high, moderate, and low ability groups under different treatment conditions responded differently to attitude towards HIV/AIDS education. This result indicated that pupils with higher ability level consistently held stronger attitude towards HIV/AIDS education in the three treatment groups than their counterparts with moderate and low ability levels. This explained the ordinal nature of the interaction effect. It could be said that the ability variable was treatment sensitive on attitude towards HIV/AIDS education.

5. Conclusion and Recommendations

Study on Spontaneous Collaborative Group Approach and REFLECT as Teaching Strategies for the improvement of pupils' attitude towards, HIV/AIDS Education is of immense value considering the larger proportion of children and youths in Nigeria educational system. The implication of their neglect in HIV/AIDS education could have grave consequences on the national education system. The way forward would seem to require close attention to using participatory approaches and experimental learning techniques because of their life-skilled nature.

The study therefore recommended that:

1. The participatory learning strategies such as Spontaneous Collaborative Group Approach and REFLECTS which have been shown to be more positive in developing pupils' attitude to HIV/AIDS education should be used by teachers of primary schools.
2. The grouping of the pupils into heterogeneous group based on their academic ability is found effective in order to develop the attitude of the less achiever. Teachers should use a combination of participatory approaches as in REFLECT and Spontaneous Collaborative Group Approach in the fight against HIV/AIDS

as far as changing norms of sexual behaviour, aggressive detection and the treatment of the diseases are concerned.

3. Teachers teaching the school core-subjects such as English Language, Mathematics, Social studies and Basic science need to be well trained on how to make effective use of these strategies. Hence, work shops or seminars should be organized by the teachers associations to update the knowledge of their members on how to use these strategies.

References

- Adedigba, T. A. (2004) Effectiveness of Two Collaborative Group Strategies in the Teaching and Learning of some Aspects of Population Education in Nigerian Colleges of Education. Unpublished Ph.D Thesis, University of Ibadan.
- Ajitoni, S. O. (2003). Effects of Quasi Participatory and Full participatory Learning Strategies on Senior Secondary Student's Environmental Knowledge and Attitudes. Unpublished Ph.D Thesis, University of Ibadan.
- Akay, H. & Boz, N (2010). The Effect of Problem Posing Oriented Analyses-II Course on the Attitudes toward Mathematics and Mathematics Self-Efficacy of Elementary Prospective Mathematics Teachers. *Australian Journal of Teacher Education*, 35, 60-75.
- Akinbote, R. O. (1993) Instructional Sequencing Models and Feedbacks Mechanism as Determinants of Achievement in Primary School Social Studies. Unpublished Ph.D. Thesis, University of Ibadan.
- Akinsola, M. K. & Awofala, A.O.A. (2008): Effects of Problem Context and Reasoning Complexity on Mathematics Problem Solving Achievement and Transfer of Secondary School Students. *European Journal of Scientific Research*, 20(3), 641-651.
- Akinsola, M. K. & Awofala, A.O.A. (2009): Effects of Personalization of Instruction on Students' Achievement and Self-efficacy in Mathematics Word Problems. *International Journal of Mathematical Education in Science and Technology*, 40(3), 389 – 404.
- Awofala, A. O. A. & Nneji, L. M. (2012). Effect of framing and Team Assisted Individualised Instructional Strategies on Students' Achievement in Mathematics. *Journal of the Science Teachers Association of Nigeria*, 43(3), 20-28.
- Awofala, A. O. A. (2007). Women and the learning of mathematics. *African Journal of Historical Sciences*, 3(1), 195-213.
- Awofala, A. O. A. (2011). Effect of Concept Mapping Strategy on Students' Achievement in Junior Secondary School Mathematics. *International Journal of Mathematics Trends and Technology*, 2(2), 11-16.
- Awofala, A. O. A, Balogun, T. A, & Olagunju, M. A. (2011). Effects of three modes of personalization on students' achievement in mathematics word problems in Nigeria. *International Journal for Mathematics Teaching and Learning*, Available at <http://www.cimt.plymouth.ac.uk/journal/awofala.pdf>.
- Awofala, A. O. A. Fatade, A. O., & Ola-Oluwa, S. A. (2012). Achievement in Cooperative versus Individualistic Goal-Structured Junior Secondary School Mathematics Classrooms in Nigeria, *International Journal of Mathematics Trends and Technology*, 3(1), 7-12.
- Awofala, A. O. A., Arigbabu, A. A. & Awofala, A. A. (2013). Effects of Framing and Team Assisted Individualised Instructional Strategies on Senior Secondary School Students' Attitudes toward Mathematics, *Acta Didactica Napocensia*, 6(1), 1-22.
- Bennell, P, Hyde, K, & Swainson, N (2002). *The Impact of the HIV/AIDS Epidemic on the Education Sector in Sub-Saharan African. A synthesis of the Findings and Recommendations of Three Country Studies*. Centre for International Education, University of Sussex Institute of Education.
- Busari, T; Olagunju, M. O. & Duyilemi, N (2005) HIV/AIDS and the Nigerian Youths knowledge and practices in Families within Communities: Implication for Science Education.
- Feist, J. & Feist, G. J. (2006) *Theories of Personality*. McGraw-Hill, New York.
- Freire, P. (1993). *Pedagogy of the oppressed*, New York: Continuum.
- Hart, S. (1989). Collaborative Learning Group Work and the spaces in between. Thames Polytechnic, Moneo.
- Johnson, D.W. & Johnson, R.T (1999). Making Cooperative Learning Work Theory into practice, 38(2). Pp67-73.
- Jurmo, P (1987) Learner Participation Practices in Adult Literacy in the United States. Unpublished Ph.D. Dissertation, University of Mass.
- Olagunju, M, Busari, T, & Ogunbiyi (2004) Differential Impacts on Peer Educations and Role-Playing Strategies on Students' Knowledge and Practices on HIV/AIDS: Implication for Science Curriculum Development.
- Slavin, R.E. (1995). *Cooperative Learning: Theory, Research and Practice* Boston: Allyn and Bacon.
- USAID (2007). *Equate Technical Brief: Gender Education and HIV/AIDS*. Retrieved on 4/9/2013 from <http://www.Usaid.gov>.

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

