

Effect of Constructivist Theatre Instruction (CTI) on Secondary School Students' Knowledge of HIV and AIDS

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Abstract

The study evaluated the effects of Constructivist Theatre Instruction (CTI) on students' knowledge of HIV and AIDS in Enugu state, Nigeria. A quasi-experimental research design was employed in the study which had three research questions and three hypotheses. 955 students from twenty-four intact classes of the twenty-four schools sampled from the six educational zones in the state were used. Experimental group students were trained on script writing, HIV and AIDS content areas and encouraged to write dramas on HIV and AIDS. The control group students were taught with conventional method. Students' Knowledge of HIV and AIDS Assessment Test (SKHAAT) was developed, validated and used as both pre and post test. Mean, standard deviation and ANCOVA were used for data analysis. Findings revealed that CTI enhanced students' knowledge of HIV and AIDS. It was therefore recommended that CTI approach should be adopted in teaching HIV and AIDS to facilitate the achievement of the 6th Millennium Development Goal. Teachers should also be trained on how to use CTI.

Key words: Constructivist Theatre, Instruction, Students' knowledge, HIV and AIDS

Introduction

The Millennium Development Goals (MDGs) focus on achieving significant measurable improvement on peoples' lives by the year 2015. Combating HIV, AIDS, malaria and other diseases is the sixth of the eight MDGs accepted internationally as the framework for measuring development processes (United Nations, 2013). Acquired Immune Deficiency Syndrome (AIDS) is a cluster of medical conditions, often referred to as opportunistic infections, caused by the Human Immunodeficiency Virus (HIV) (Avert, 2012; Cadman, 2009). Researchers reported variations in the HIV and AIDS prevalence rate between urban and rural areas of countries (Federal Ministry of Health (FMH), 2008;

Population Reference Bureau (PRB), 2000). Enugu state of Nigeria share boundary with the worst state (Benue) with respect to prevalence rate in the country (Ezeugwu, 2005; FMH,2008) and also has two major overnight stop-over towns for long distance travellers (Obollo-Afor and 9th mile), renowned for high level promiscuity (Okere, 2006). Till date, HIV and AIDS have no proven cure (Obidoa, 2010). In the absence of vaccines capable of arresting the spread of HIV, desperate efforts must be focused on empowering people through apt knowledge to alter behaviors and practices that give AIDS its pandemic energy; like educating people of practices which could place them at risk, informing those in high risk groups on how to lessen the probability of infection, helping the already infected to cease practices known to spread the virus, and inculcating appropriate avoidance behaviors which could be built into everyday social habit.

Adolescents, a group mostly affected by HIV and AIDS, is the focus of this work because of the high rate of sexual permissiveness among them (Ani, 2005; International Women Health Coalition (IWHC), 2006) and because of the call by the Federal Ministry of Health (FMH, 2008) to focus on the youths to ensure sustained downward trend in new infections. Youngsters are often uniquely imaginative, using currently fashionable styles of music, theatre and arts as powerful vehicles for information. Such will hopefully bring about behavioral changes that could be more permanent than mere information giving.

Theatre embraces the entire dramatic output including the written and the performed (Oshionebo, 2006). Dramatic performance is a story told in actions (a thing done rather than a thing said) before an audience by actors on a given space (stage). Play or drama or dramatic production is that process by which a story or script is realized (or given life) on the stage through the help of actor, director, designers and so on. In this view, it comprises not only drama but also circus, dance, opera, puppetry and may communicate experiences through gestures, songs, speech and music. Its purpose is to delight and instruct with the ultimate goal of delivering the individual from the consciousness of self. The love for theatre is so general and the itch for acting strong among young people. Such an approach may better appeal to the learner's initial knowledge and as such will facilitate conceptualization and behavioural change. In line with the above, WHO (1994) pointed out that theatre is an excellent vehicle for information about AIDS. It holds the audience's attention and is an acceptable way of bringing up sensitive or taboo issues that people find hard to talk about in other settings. Denman and Pearson (1996) argued that theatre approaches are environmentally dependent and appeal better to individuals of differing personality and psychosocial configurations (gender, socio-economic status and location). Constructivism is a theory of knowledge that argues that humans generate knowledge and meaning from interaction between their experiences and ideas. Constructivist theatre, which stems from drama actively constructed by students in collaboration with other members of society, may be a powerful innovative tool in boosting students' knowledge of HIV and AIDS. Constructivist theatre is the technique of using theatre in line with constructivist underpinnings. Theatre, in this sense, will follow the guidelines for designing constructivist learning environment which must be active, constructive, collaborative, intentional, complex, contextual and reflective (Wilson, 1996). Instruction is the act, practice or profession of imparted knowledge or acquired item of knowledge. Constructivist Theater Instruction (CTI) is therefore the act or practice of imparting knowledge generated by students from their experiences, ideas and interactions with significant persons/materials presented in action (theatre) by students to other students (Anyaeibunam, 2012). Such an approach that may possibly

provide a suitable platform for enhancing HIV and AIDS knowledge of students from urban and rural areas needs to be investigated.

Research Questions

The following research questions guided the study:

1. What is the effect of Constructivist Theatre Instruction package on students' mean scores in HIV and AIDS knowledge test?
2. What is the influence of CTI approach on students' mean scores in HIV and AIDS knowledge test among urban and rural school students?
3. What is the interaction effect of method and school location on the students' mean score in HIV and AIDS knowledge test?

Hypotheses

The following null hypotheses were tested at an alpha level of 0.05.

H₀₁: There is no significant difference in the mean score of HIV and AIDS knowledge test between the students exposed to Constructivist Theatre based instruction and those exposed to conventional teaching method.

H₀₂: There is no significant difference in the mean HIV and AIDS knowledge scores of urban and rural school students exposed to the CTI approach.

H₀₃: The interaction effect of method and school location on the students' mean scores in HIV and AIDS knowledge test is not significant

Method

The pre-test, post-test non-equivalent control group quasi-experimental research design was employed because intact classes were used. The study was conducted in Enugu state of Nigeria with six education zones. Enugu was used because it shares boundaries with Benue state, the state with the highest prevalence rate in Nigeria (FMH, 2009) and also because it has two major overnight stop-over towns (Obollo-Afor and Ninth mile) for long distant drivers renowned for high level promiscuity.

Four co-educational schools (two urban, two rural) were drawn from each of the six education zones in the state, using the stratified random sampling technique yielding a total of twenty-four schools (twelve-urban, twelve rural). Schools were classified into urban and rural based on the classification of the Post-Primary School Management Board (PPSMB), 2008. In each of the schools, one intact class of SSII students was taken by simple random sampling, resulting to twenty-four intact classes. Students' Knowledge of HIV and AIDS Assessment Test (SKHAAT), with 0.7 stability index and internal consistency index of 0.95, was used to collect data for the study.

Experimental Procedure

The instrument was trial tested on SSII students of Shalom Academy, Nsukka and items that survived were packaged as SKHAAT. The Constructivist Theatre Instruction package was produced using SSII students from the University of Nigeria Secondary School and Community Secondary School, Alor-Uno, both in Nsukka.

In each of the above schools, the following steps were taken:

- Talk one – An expert from theatre arts department instructed the students on the features of a good drama script (Training process for script writing) and also exposed them to play production process.

- Talk two – The researcher enlightened the students on all the content area in HIV and AIDS education building in constructivist design which insists that students must be actively engaged in situations that involve collaboratively considering their own explanation for phenomenon, resolution of problems or formulation of questions.
- Writing of scripts (constructivist drama) by the students – Thereupon, the students were encouraged to construct dramas that could explain succinctly, their understanding of all the content areas in HIV and AIDS education. Students were asked to actively construct their own knowledge by making meaning out of the situation by themselves with support and guidance from the researcher. Cash prizes were given to the first, second and third best drama writers.
- Vetting and selection of scripts was done by five experts, guided by the features of good dramas.
- Acting and videoing of the selected script or drama by students – Permission was obtained from the parents of the interested students. Token fees were paid as incentive to the good and committed students to act the drama and it was videoed.
- Rating of the chosen constructivist HIV and AIDS drama – The selected drama was subjected to the rating process of a good drama. Four experts from the theatre arts department of the University of Nigeria, Nsukka rated the constructivist theatre package using thirteen different criteria for rating drama. The videoed constructivist theatre was thus adopted as a teaching tool to be used in all the sampled school.
- Training of Assistant Researchers – Twelve research assistants were trained based on the objectives of the research. Six of them were trained to teach HIV and AIDS contents with the conventional method in the urban and rural schools used as control. The other six assistants were trained to teach HIV and AIDS content with constructivist theatre in all the experimental groups' urban and rural schools.

The training spanned through four days of one hour contact, per day (for each group— experimental and control). The first day was used for briefing followed by a second day of instruction on exactly what they are expected to do. Finally, the research assistants were evaluated after training to see how effective they are with the package before using them. Micro teaching was done by each research assistant to be sure they do exactly what is expected.

- Pre-testing – In all the twenty-four sampled schools, the knowledge instrument (SKHAAT) was administered on both the control and experimental groups.
- Treatment for the experimental and control groups – In each of the sampled schools, the SS2 students in the experimental groups were taught using only the videoed theatre. Before they watched the video, teacher will introduce the constructivist theatre technique, tell students what the theatre based instruction is all about, list and discuss the objectives of the lesson with them and thereafter, ask them to watch attentively and prepare to discuss the film and answer questions at the end. After watching, they were given the opportunity to respond, reflect and react to what they have seen, ask question, say what they

like, what they agree with and what they did not agree with and possibly construct a better drama in the area if they can.

A conventional (traditional) HIV and AIDS instructional package (lesson note) was used in teaching the control group.

- Post-testing – After treatment, the knowledge test was administered to both the experimental and control group students.

Results

The results of data analysis are presented and interpreted in the sequence of the research questions and hypotheses guiding the study.

Research Question One- What is the effect of Constructivist Theatre Instruction package on students' mean scores in HIV and AIDS knowledge test?

Table 1: Mean and Standard Deviation of post-test scores of students' knowledge of HIV and AIDS

Groups		Post test
Experimental	N	435
	Mean	61.7
	Std. Deviation	15.6
Control	N	520
	Mean	39.3
	Std. Deviation	12.1

Table 1 shows that the post-test mean of the experimental group is 61.7 which is greater than the post-test mean for the control group of 39.3. The Constructivist Theatre Instruction package is therefore effective since the students taught with it had higher mean score compared to those taught with the conventional method.

Hypothesis One: There is no significant difference in the mean score in HIV and AIDS knowledge test between the students exposed to Constructivist Theatre based instruction and those exposed to conventional teaching method.

Table 2: Analysis of Covariance (ANCOVA) of mean scores of HIV and AIDS knowledge test (for hypotheses 1,2 & 3)

Dependent Variable: PostKnowledge

Source	Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	146967.336(a)	8	18370.917	113.754	.000
Intercept	104250.786	1	104250.786	645.531	.000
PreKnowledge	1232.582	1	1232.582	7.632	.006
Location	13144.953	1	13144.953	81.395	.000
Groups	71516.820	1	71516.820	442.839	.000
Location * Groups	17395.431	1	17395.431	107.714	.000
Error	152775.401	946	161.496		

Total	2639385.000	955
Corrected Total	299742.737	954

a R Squared = .490 (Adjusted R Squared = .486)

Table 2 shows that the F-value for the groups (experimental and control) is 442.839. This value is significant at 0.00 and also at 0.05. This means that the corresponding null hypothesis is rejected. There is therefore a significant difference between the experimental and control groups. The observed difference between the means of the experimental and control group earlier shown (in table 1) is actual difference, not attributed to chance or experimental error. This means that there is a significant difference in the mean HIV and AIDS knowledge scores between the students exposed to constructivist theatre instruction and those not exposed in favour of the former group.

Research Question Two- What is the influence of CTI approach on students' mean scores in HIV and AIDS knowledge test among urban and rural school students?

Table 3: Mean and standard deviation of post- test scores of urban and rural students' knowledge of HIV and AIDS

	Rural (N=127)		Urban (N=308)	
Pre knowledge	Mean 41.9	SD 14.8	Mean 37.0	SD 8.2
Post knowledge	50.0	10.4	66.5	14.8
Mean Difference	8.1		29.5	

Table 3 shows the post-test means of urban and rural students in the HIV and AIDS knowledge test as 66.5 and 50.0 respectively- a difference of 16.5 in favour of urban students. The mean difference of 8.1 for the students in the rural area is lower than 29.5 for students in the urban area – a difference of 16.5, in favour of urban students. It appears therefore that school location has influence on the HIV and AIDS knowledge of the students and that the constructivist theatre instruction is more effective on the urban students than on their rural counterparts.

Hypothesis Two: There is no significant difference in the mean HIV and AIDS knowledge scores of urban and rural school students exposed to the CTI approach.

From table 2, the F-value for location (urban and rural) is 81.395. This value is significant at 0.00 and also at 0.05. This means that the corresponding null hypothesis is rejected because there is a significant difference between the urban and rural students HIV and AIDS knowledge. The observed difference in their post-test means, as shown in table 3, is actual difference and not attributed to chance. This means that there is a significant difference in the mean HIV and AIDS knowledge scores between urban and rural students exposed to constructivist theatre instruction in the urban areas.

Research Question Three- What is the interaction effect of school location and method on the students' mean score in HIV and AIDS knowledge test?

Table 4: Mean and standard deviation of post-test scores of students' knowledge of HIV and AIDS (by method, by school location)

Groups	Location		Post Knowledge
Experimental	Rural	N	127
		Mean	50.0
		Std. Deviation	10.4
	Urban	N	308
		Mean	66.5
		Std. Deviation	14.8
Control	Rural	N	219
		Mean	40.1
		Std. Deviation	12.6
	Urban	N	301
		Mean	38.8
		Std.Deviation	11.8

Table 4 shows that the HIV and AIDS knowledge post-test means for the control group urban and rural students are 38.8 and 40.1 whereas, those for the experimental group urban and rural students are 66.5 and 50.0. It seems that the constructivist theatre instruction is effective in increasing the HIV and AIDS knowledge of students irrespective of school location but appears to favour more, those in the urban areas.

Hypothesis Three: The interaction effect of school location and method on the students' mean scores in HIV and AIDS knowledge test is not significant.

From table 2, the F-value for location and group is 107.714. This value is significant at 0.00 and at 0.05. This means that the null hypothesis (H_{03}) is rejected. The interaction effect of method and school location on the students' mean scores in HIV and AIDS knowledge test is significant. The observed difference between the control and the experimental groups urban and rural students are actual differences, not due to experimental errors. This means that there is a significant interaction effect between school location and method on students' HIV and AIDS knowledge test.

*See profile plot on the interaction below

Estimated Marginal Means of PostKnowledge

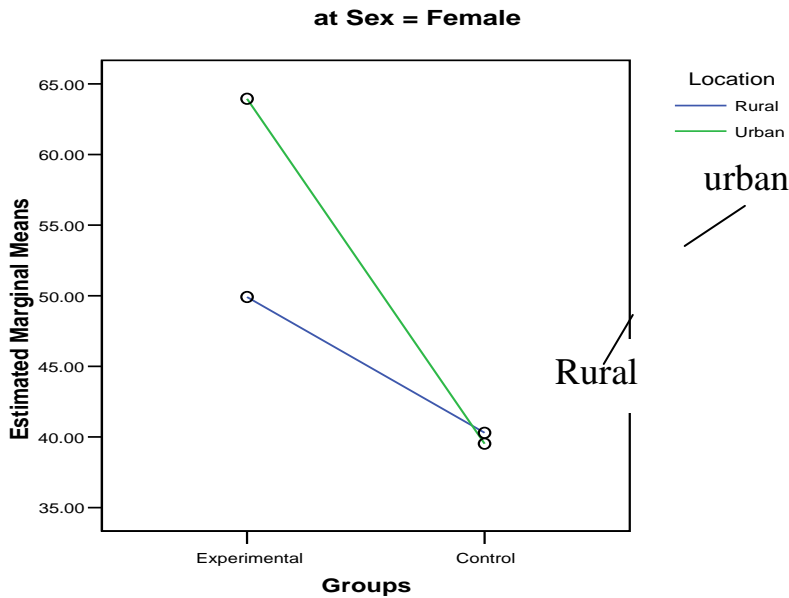


Fig i: Profile plot of interaction between method and school location on students' mean HIV and AIDS knowledge

Discussion

Students exposed to CTI have higher mean scores (61.7) than the control group (39.3) on the HIV and AIDS knowledge test. Since the calculated F-value of 442.839 was significant at 0.05 probability level, the null hypothesis (H_{01}) of no significant difference was rejected. This implies that students' exposed to CTI performed better than their counterparts that were not so exposed. This agrees with the observation of the World Health Organisation (WHO, 1994) that theatre is an excellent vehicle for information about HIV and AIDS. Similarly, Denman and Pearson (1996) and Obadiogwu (2006) variously argued that theatre approaches are environmentally dependent and appeal better to individuals of differing personalities and psychosocial configurations.

This result is not surprising since in constructivism, students do more than process information. They are provided with opportunities to build on prior knowledge, to actively construct new knowledge/understanding of HIV and AIDS through interaction with significant others in their environment. This is because the growth of understanding is dependent on concept exploration through challenging apparatus and also through concrete materials (Anyaeibunam, 2012). This therefore suggests that with respect to

HIV and AIDS education, students should not merely hear what ‘experts’ think and say but should be helped to see, touch and feel indispensable in the battle against the scourge.

From the results of the influence of school location on students’ knowledge of HIV and AIDS, rural students had a lower mean score of 50.0 compared to the mean score of 66.5 by the students in the urban area. ANCOVA revealed that the F-value for location (urban and rural) is significant at 0.05. The null hypothesis (H_0) of no significance was rejected because there is a significant difference between the mean scores on the HIV and AIDS knowledge test by the urban and rural students in favour of the urban dwellers. This result is not surprising because literature is replete with consistent data on the crucial role of education and empowerment in the battle against HIV (IWHC, 2006). Rural areas are often deficient in these two major areas. More of the rural areas are often referred to as High-risk environments with respect to HIV because of severe handicaps like poverty, paucity of information, chronic shortage of basic necessities for HIV prevention (like disposable syringes, test kits for screening blood, rubber gloves, condoms, etc).

The results on the interaction effect of method and school location on students’ knowledge of HIV and AIDS show that both urban and rural students in the experimental group had higher knowledge scores than their counterparts in the control group. The result of the analysis also shows that the urban students gained more than their rural counterparts. The F-value for location (urban and rural) which is 81.395 is significant at 0.05. The hypothesis of no significant difference in the mean knowledge scores of urban and rural students exposed to constructivist theatre instruction on HIV and AIDS was therefore not accepted. Students in urban areas gained more from the use of CTI. This result could possibly be explained by the reluctance that follows the acceptance of sex issues and greater prevalence of myths and misconceptions about HIV in rural schools (Trisdale, 2009). Many rural schools are culturally influenced by the practices in the community where the school is situated. Some cultures do not accept teaching youths about sex and sexually transmitted diseases. As a result of diversity of beliefs about some practices, the acceptance of HIV and AIDS education in rural areas could be a worrying issue. This must have affected the performance of schools located in rural areas in the test. Also paucity of information, which is a major limiting factor in the rural areas from literature, must have affected adversely the rural students since constructivist theatre instruction was used. All the same, the finding that all the groups exposed to CTI performed better than their counterparts who were not is a welcome development that should be employed in teaching other STEM areas.

Educational Implications of the findings

The findings of the study have implications for the teaching and learning of school subjects in general. As reported, the effect of constructivist theatre instruction on students’ knowledge was higher compared to their counterparts that were not treated with such instruction. This tends to imply that the use of this package in delivery of lessons in schools may hold positive outcomes –across different subjects.

Another implication of the finding of the study is that theatre buildings and facilities may be considered necessary when schools are built. Such facilities may be useful in the drilling of students in theatre instructions in schools and colleges. There are also implications on teacher education institutions preparing the pre-service teachers on the

use of theatre instructions in lesson delivery in schools. This further implies that in-service training of teachers on the art of lesson delivery using theatre package is required. Furthermore, the incidence of HIV and AIDS pandemic will be highly reduced if theatre instruction model is utilized as a campaign medium against the disease. Much has been done on teaching methods as they affect teaching and learning in schools. The traditional teacher-centered, expository or talk-chalk methods should be de-emphasized for the more modern student-centered, activity and discovery methods like the constructivist theatre instruction.

Constructivist theatre instruction is a major offshoot of the hands-on method. The use of theatre for learning is not foreign to Nigeria; the intensity of use is the problem. This implies that constructivist theatre learning should be more regularly adopted in teaching students. Since pupils learn best by actively constructing their own understanding, students should be given the opportunity to learn in this way. Learners thus construct their own knowledge often with help from teachers, coaches or guides or even peers.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Constructivist theatre learning method should be adopted in teaching students issues on HIV and AIDS in secondary schools.
2. Teachers and all those involved in the education industry should internalize the results of this study for meaningful application in teaching and learning of students.
3. More in-service training programmes should be organized to train teachers in play production so as to effectively handle constructivist theatre instruction.
4. Government should mobilize and support broad partnership especially with students for HIV and AIDS protection and prevention.
5. Federal and state governments should assist institutions financially to enable them adopt constructivist theatre learning instruction, since it is cost intensive.

Conclusion

1. Students taught or exposed to the constructivist theatre instruction package obtained higher mean knowledge scores on HIV and AIDS than their counterparts not so treated.
2. School location significantly influenced the urban students' performance on the HIV and AIDS knowledge test better than their rural area counterparts.
3. There is a significant interaction effect of method and school location on the students' mean scores in HIV and AIDS knowledge test. The method improved the HIV and AIDS knowledge of all students especially those in the urban areas.

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