

# A COMPARISON OF SOME TEACHING METHODS IN AN ADULT EDUCATION PROGRAM

by

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## **Abstract**

*Over the course of two consecutive years, the scores of learners in an adult education program who were taught by various student instructors using the Lecture and Media methods were documented. The combined class of adult learners was designated the control group and received the normal Lecture classes for 45 minutes each week. The same class of adult learners was also used as the experimental group and received their teaching through the use of media methods. Part of the lessons was conducted using the radio/tape-recorded material and another group of instructors used power point presentation. An evaluation of the two separate methods' test scores was compared at the end of the semester along with their entry scores using the t-test statistical technique. The nature of the problem was that the researcher sought to discover if there is a difference in the learners' reception of these different methods. The result of the experiment shows that there is a slight difference in the learners' performance between the Lecture and Media methods. The results may not be conclusive but there is evidence to believe that the use of media method holds a slight edge over the usual Lecture method that was more commonly used. It was therefore advocated that more use of varied methods and devices be encouraged in the conduct of adult education classes, especially considering the adult learners' special circumstances.*

**Key words:** Teaching methods, Lecture method, Media method, Adult learners

## **Introduction**

Practicing adult educators who are concerned about the academic well being of the adult learner are well aware that one of the major problems encountered by a sizeable proportion of them, is the choice and use of appropriate teaching methods. Understandably, particular interest is centered upon the selection and use of method both as a way of creating a conducive learning atmosphere as well as its influence upon academic performance and achievement; method definitely plays an important part in adult teaching/learning (Bakare, 1999). According to Okenimkpe (2003) method is key to the realization of learning objectives and it is therefore necessary to pay adequate attention to methods used. There are many research based studies on the effect of different methods in adult learning and a plethora of publications also but not enough to cover every different adult learning situation.

## **The methods**

The lecture method is one of the commonest in use for any type of educational transaction. It is more popular in formal type of education but is also used in adult education. It is largely a one-way transmission and engages mostly the aural domain. The media method is often used strategically to create awareness, inform, entertain and advertise among others. It also invariably works very well as a teaching aid to support any chosen method and contributes immensely to adult education. It is also very popularly used in distance education. Different kinds of media - especially the electronic constitute a technological service that can be used to share information and ideas with many people at the same time, in many places and across distances. It is a combination of machines and human talents to create visual and auditory art and so can be a powerful tool in adult education, when used properly. It may be in the form of radio or television and in this case, the use of the computer for power point presentation.

The different types of media that can be used for adult teaching/learning include the Audio: tape, radio etc. Using the media method means that the lesson is created around a certain medium – in this case the radio/tape recorder and the computer for power point presentation. For this experiment, the *tape* was used because of it is relatively inexpensive and is simple and easy to use and can work with any level of learners. The recording was done on the subject topic by the student teacher in simple and clear English. One of the advantages of using the *Radio* for this

type of project is that adult learners who are illiterate can equally benefit from listening to the audio media. The radio is portable and can be battery-operated; it is also capable of presenting the verbal message (through inflection) in a more stimulating manner than the print media for example. The radio has been used successfully in places like Tanzania, Ghana and India to educate a large number of adults. In this situation, the radio was adapted and combined with a question/answer session after. Lowe (1975) had argued that no learning situation is best handled with only one method and therefore suggests a variety of methods for each different stage, aspect and concept in order to bring out the best in each situation. He firmly believes that the simplest form of method is the combination of different methods. He however observed that oral teaching still dominates in adult education. On the other hand, even though Beacham and Alty (2006) study was on people with dyslexia, it still emphasizes the contribution that media techniques can bring to enrich adult learning practices. It is important to use varied methods to bring out the best outcome in adult learning especially when one considers Dale's cone of learning experience. It is always good to use multi-sensory strategies in order to accommodate all styles of learning.

### **Problem of the study**

There are various methods available for use and possibly enough information out there to establish a relationship between the use of a suitable method and the achievement of teaching/learning objective. However there is scant information and training to ensure that facilitators are sufficiently familiar with the appropriate use of teaching methods for the adult learner. The problem of this study was to investigate and compare the effects of two different methods of evaluation used in Integrated Science/Social Studies classes in adult Literacy in Lagos, and to determine what effect these methods had on the end of course grades, if any. This study attempted to show what relationships exists between two different methods.

### **Research Question**

1. Do the students who are taught using the regular Lecture method score significantly higher on end of term grades than the ones who are taught using media methods?

### **Hypothesis**

1. Ho. There will be no significant difference between the entry test scores of adult learners taught with the Lecture method.
2. Ho. There will be no significant difference between the entry test scores and the test scores of adult learners taught using media methods.
3. Ho. There will be no significant difference between the test scores of adult learners taught with the Lecture method and Media methods.

### **Conceptual framework**

Edgar Dale's 'Cone of Experience', cited in Anderson (2000), is relevant as a reference for choosing a suitable teaching method. It refers to several optional methods to match the style of the learner, as well as the way his mind functions in the learning process, in order to maximize the potential for accomplishing his learning objectives. He therefore suggests a combination of the methods and teaching aids in a suitable matrix. The adult learner usually falls within the ICONIC stage of the Cone of Experience and therefore commensurate methods that work best for them include the use of Radio, Tape recorder, Television, Exhibition, Study trips and Demonstration. The Tape recorder (in place of Radio broadcast) and Power Point Presentation were therefore used for the study.

### **Limitation of the study**

This study is limited to a comparison between only four arms of different classes ranging from Primaries 5 & 6 as well as Junior Secondary (JS) 1 & 2, as they are the ones offering these subjects. Only end of lesson grades were compared in the classes. It is also possible that two teachers using the same techniques to teach the same content will often do so in different ways and the outcomes of their lesson may not be the same. However this is a collaboration between groups of student teachers who worked together on the project.

### **Basic assumptions**

One of the basic assumptions was that the classes are reasonably homogenous and that the group teachers for the classes provided equal learning opportunities for all students. It was also assumed that the pre-test did not sensitize the students to the post test.

## **Methodology**

For this study a classroom experiment strategy was used to test the effectiveness of two separate methods as it would occur in an actual classroom setting. The experiment was conducted in the Literacy classes run by the Department of adult education of the University of Lagos. The pre-test (entry scores) were recorded at the beginning of the experiment and the post test at the conclusion of the experiment. A comparison was made at the end of the course to determine if there was a significant difference between the methods utilized using the t-test. All of the students in the selected classes were used for the study as the sample was small to begin with.

Two separate methods – the Lecture and Media methods were used to present the same subject at a time (Integrated Science and Social Science), which were selected as some of the core subjects, and the same topic that has already been taught using the Lecture method. This was done over a period of two consecutive years for the evening classes. The same group of classes were combined (JS 1 and 2 and Primary classes 5 and 6) and were also used both as the control and experimental group. They were taught with the Lecture method and the test scores after were recorded. The same classes were again the experimental group and were taught using the media method (Power Point Presentation/Tape recording). The same tests were rearranged and administered as a post-test at the end of the experiment. The tape recording was used in lieu of the originally planned radio broadcast on the Local University Radio (UNILAG FM) because of logistic and time constraints. However, the tape recording served the same purpose. The classes were taught by a group of year three student teachers from the Adult Education Department of the University of Lagos.

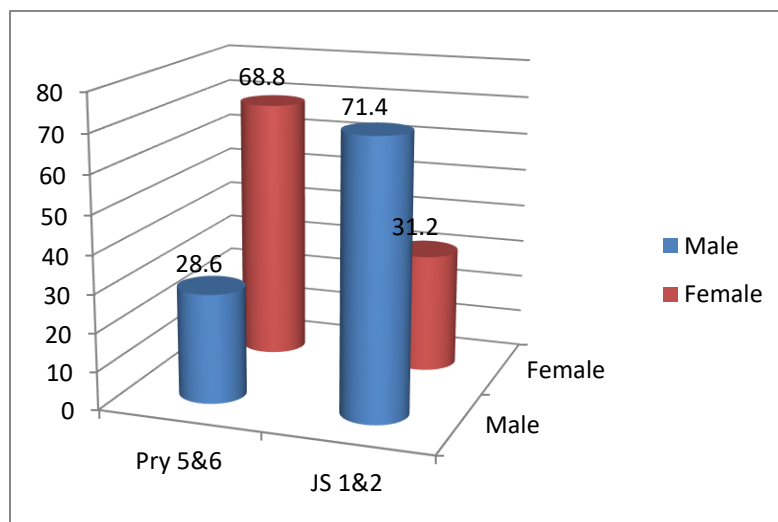
The Radio/Tape Recorder were used for some sessions and then the Power Point Presentation. The radio/tape recorder classes appealed mainly to their auditory senses but the Power Point combined audio and visual. These media techniques were used to see if there will be a difference in the receptivity of the learners and the extent of the difference. Hitherto, the Lecture has been the main method utilized regularly in teaching throughout the classes.

Differences in end of course grades were further subjected to a t-test to determine the significance between the means of the samples. Analysis of the data was performed to determine if this difference was significant. An independent t-test for testing the significance of the difference

between the two independent sample means was used for the analysis. The desired level of significance for the null hypotheses was established at 0.05 and the degree of freedom was 36. Students' scores were taken over the course of two years in the two subjects and only the consistent students were considered in the combined classes. The program (Adult Education Literacy Class), an initiative of the Adult Education Department of the University of Lagos is an outreach program as part of its social responsibility to the community. It is supported with books and other materials by the Lagos State Ministry of Education but fully staffed by the Department. The students in the Department taking the ADE 325 (Internship in adult education) course were used as the teachers for the period in order to expose the students to the concept of working with adult learners in general. Students did team teaching in groups of tens. The subjects were chosen because they form the basic required subjects across all levels.

## Findings

Table 1: Respondents' class and sex



The first table shows that there is more female presence in the lower class (the Primary 5 and 6) at 68.8% and more male in the higher (Junior Secondary – JS 1 and 2) class at 71.4%.

Table 2: Student test scores

s/n	sex	Level	Average entry score	Subject and scores and methods					
				Subject using Lecture method			Subject using Media method		
				Pre-test scores			Post-test scores		
				Integrated Science	Social Studies	average	Integrated Science	Social Studies	Average
1	M	J1	40	60	70	65	90	90	90
2	F	J1	20	40	60	50	50	60	55

3	M	J1	25	30	70	50	40	50	45
4	M	J1	35	70	40	55	70	90	80
5	F	J1	40	30	50	40	70	50	60
6	M	J1	30	30	40	35	70	90	80
7	M	J1	40	40	30	35	60	80	70
8	M	J1	30	20	10	15	70	80	75
9	F	J1	20	20	30	25	70	60	65
10	M	J1	40	40	50	45	60	80	70
11	F	P6	30	50	50	50	50	60	55
12	F	P6	20	40	40	40	40	40	40
13	M	P6	40	10	10	10	45	35	40
14	M	P6	30	30	30	30	50	60	65
15	F	P6	55	30	40	35	50	50	50
16	F	P6	50	30	50	40	80	90	85
17	M	P6	40	60	60	60	60	70	65
18	F	P6	50	30	50	40	80	90	85
19	F	P6	40	50	60	55	50	90	70
20	M	J1	55	60	60	60	90	90	90
21	M	J1	25	30	70	50	40	50	45
22	M	J1	35	70	40	55	70	90	80
23	F	J1	40	30	50	40	70	50	60
24	M	J1	30	30	40	35	70	90	80
25	M	J1	40	40	30	35	60	80	70
26	M	J1	30	20	10	15	70	80	75
27	F	J1	20	20	30	25	70	60	65
28	M	J1	40	40	50	45	60	80	70
29	F	P6	30	50	50	50	50	60	55
30	M	P6	20	40	40	40	40	40	40
31	F	P6	40	10	10	10	45	35	40
32	M	P6	30	30	30	30	50	60	65
33	F	P6	55	30	40	35	50	50	50
34	F	P6	50	30	50	40	80	90	85
35	M	P6	40	60	60	60	60	70	65
36	F	P6	50	30	50	40	80	90	85
37	M	J1	40	50	60	55	50	90	70

## Analyses and discussion

**Table 3: Paired Samples Statistics (using SPSS 15.0)**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	lecture mthd	40.4054	37	14.06228	2.31182
	entry score	36.3514	37	10.38486	1.70726
Pair 2	media mtd	65.8108	37	15.06991	2.47748
	entry score	36.3514	37	10.38486	1.70726
Pair 3	lecture mthd	40.4054	37	14.06228	2.31182
	media mtd	65.8108	37	15.06991	2.47748

**Table 4: Paired Samples Test (using SPSS 15.0)**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		Mean	Std. Deviation	Std. Error Mean
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Pair 1	lecture mthd - entry score	4.05405	16.23772	2.66947	-1.35987	9.46798	1.519	36	.138
Pair 2	media mtd - entry score	29.45946	14.61467	2.40264	24.58669	34.33223	12.261	36	.000
Pair 3	lecture mthd - media mtd	-25.40541	17.69253	2.90863	-31.30439	-19.50642	-8.734	36	.000

**Table 5: pre and post test scores in Integrated Science and Social Science subjects**

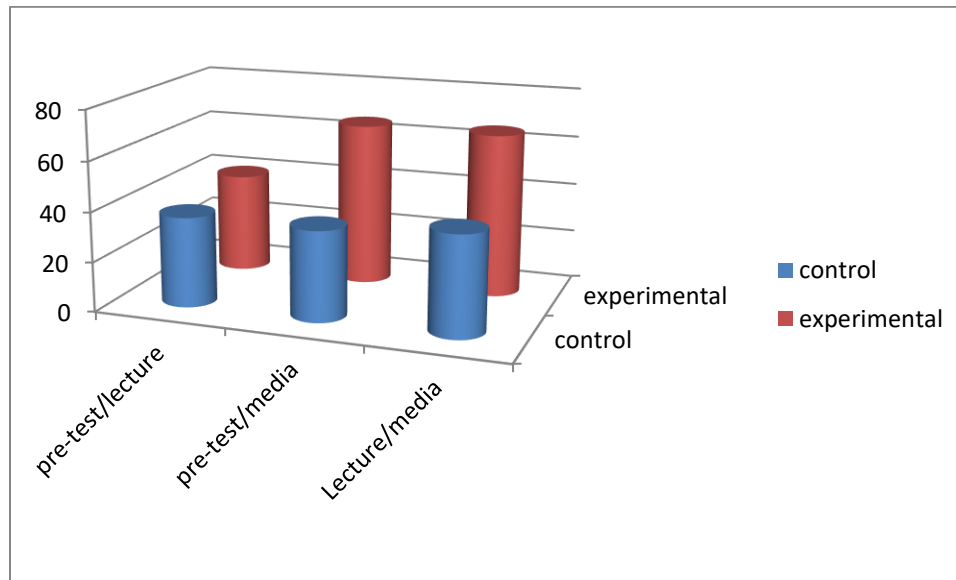


Table five shows the difference in the scores in Integrated Science and Social Studies subjects pre and post-test using the Lecture and Media methods.

**Table 6: Difference between entry score and the Lecture method**

Method	n	Mean	SD	t	df	Sig. P	Remark
Entry score	37	36.35	10.39	1.52	36	0.14	Not significant
Lecture method	37	40.41	14.06				

Using SPSS (15.0), the mean score of the entry method of 36.35 is less than that of Lecture method 40.41. However, the calculated t of 1.52 is not significant at 5% level ( $p > 0.05$ ). This implies that there is no significant difference between the entry score and the use of the Lecture. The first



hypothesis which stated that there will be no significant difference between the entry score and the use of the Lecture method was therefore accepted. This suggests that there is no significant difference in the mean scores.

Table 7: Difference between entry score and the Media method

Method	n	Mean	SD	t	df	Sig. P	Remark
Entry score	37	36.35	10.39	12.26	36	0.00	Significant
Lecture method	37	65.81	15.07				

For null hypothesis 2 which stated that there will be no significant difference between the mean of the entry scores and the test scores after using the media method, the mean score of the entry method of 36.35 is less than that of Lecture method of 65.81. The calculated t of 12.26 is significant at 5% level ( $p > 0.05$ ). This implies that there is a significant difference between the entry score and after the use of the media method. The second hypothesis was therefore rejected. This means that there is a significant difference in the test scores after the use of the media method.

Table 8: Difference between Lecture and the Media methods

Method	n	Mean	SD	t	df	Sig. P	Remark
Entry score	37	36.35	10.39	8.73	36	0.00	Significant
Lecture method	37	65.81	14.06				

The third hypothesis compared scores between the two methods Lecture and media. The result was also significant. The calculated t of 8.73 is significant at 5% level ( $p > 0.05$ ). This implies that there is a significant difference between the test scores between the use of the Lecture and media methods and the hypothesis was therefore rejected. This means that there is a significant difference in the test scores after using both the Lecture and Media methods. It also shows that the media method was more significant than the lecture method which suggests that the media method has an advantage over the lecture method.

Findings of the study cannot be conclusive because the student teachers were different over the period of the two years the scores were taken, among other factors. Nevertheless, there seems to be a definite increase in the scores above board, for the test scores taken after using the Media techniques. This suggests that the media method makes for better grades and is therefore better

which supports Knowles (1984), Bakare (1999) and Kira (2006), among others, who suggest the use of a method that will engage more than one sense of the adult learner at a time. This is also in order to take cognizance of the adult learner's deteriorating sense of hearing and sight. The finding also agrees with Beacham and Alty (2006) report according to research by Boston University and UCLA, that using multi-sensory methods, a technique that engages more than one of the senses, helps adults improve their performance significantly faster than methods that use only one stimulus and even more effective for adults learning new skills. Even though the traditional belief is that the five senses operate largely as independent systems, mounting data suggests that interaction between vision, hearing, smell, touch and taste is more likely in terms of how human brain processes sensory information. It is also to be noted that Multi-sensory methods apply to different subjects across board.

Maybe the novelty of different teaching methods from the usual 'chalk and talk' (Lecture) method made the students pay more attention to the teachers and therefore boosted their test scores for the media techniques. There is no doubt, however, that adults are more stimulated by the use of pictures (which were used copiously in the Power Point Presentation and the 'adventure' of listening to a class broadcast on the (local UNILAG FM) radio transmission by the student teachers. It is therefore recommended that there should be more use of media or a combination of different methods to enrich the adult learner's teaching/learning experience. It is important to use varied methods to bring out the best outcome in adult learning especially when one considers Dale's cone of learning experience which purports that we tend to remember 10% of what we read, 20% of what we hear, 30% of what we see and hear and 70% of what say and 90% of what we say and do. This signifies the level of involvement and deals with the learning modality or the way we process information in terms of input, recording and retrieval in the brain (visual, auditory, tactile or kinesthetic).

### **Conclusion and recommendations**

An analysis of the data obtained from the investigation upheld the first null hypothesis and rejected the other two. This shows that students who were taught using the lecture method will not necessarily receive a higher end of course scores but that those taught with media methods definitely performed better than when they were taught with the lecture method only.

The following recommendations were therefore made:

1. The study should be replicated with other methods to provide the opportunity to further validate the findings and see the effect of other methods as well.
2. Method should form a firm foundation of any curriculum in the training of adult educators. Training of adult educators in the use of methods is crucial so that they can be familiar with the many and different teaching methods available for use and know how to match methods and teaching/learning situations appropriately.
3. More attention should be paid to the combination of methods for adult learners and even more so the use of audio-visual techniques to support any method utilized in order to maximize learning potential.

The implication for the study is that method must be accorded the well deserved place of importance in adult education for the achievement of learning objectives. This study will contribute to teacher understanding of the intricacies of method use for adult learners. The need for use of electronic media as a support for teaching is also re-emphasized. This study provides a base for future studies and experimentation in the area of adult teaching methods. It is hoped that better use of more imaginative and innovative instructional strategies will be adopted for adult learners, especially in the literacy classes in the nearest future. It is always good to use multi-sensory strategies in order to accommodate all styles of learning; after all - what I hear I forget, what I see I remember but what I do I understand.

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