

## EFFECTS OF ADVANCE ORGANIZERS TEACHING STRATEGY ON HEARING IMPAIRED STUDENTS' ACHIEVEMENT AND RETENTION IN SOCIAL STUDIES IN RIVERS STATE

**Dr. Birabil, Saturday Tete**

Department of Curriculum Studies and Educational Technology  
Faculty of Education, University of Port Harcourt

### ABSTRACT

The study investigated the effects of advance organizer on academic achievement and retention of hearing-impaired students in Rivers State. A sample of 40 students (20 males and 20 females) drawn from the three special schools in the state were assigned to experimental and control groups through ballot sampling technique. Three research questions were answered while two hypotheses were tested in the study. Instrument used in data collection was Social Studies Achievement Test (SOSAT). Data collected were analysed using mean ( $\bar{x}$ ) and standard deviation (SD) for research questions, while t-test was used to test the hypotheses at 0.05 level of significance. The finding revealed, among others, that advance organizer teaching strategy improved students' academic achievement; male students performed better than females in achievement; advance organizers enhances retention ability to a large extent. Based on the above findings, it was recommended, among others, that advance organizers should be adopted at all levels of education for teaching social studies while in-service training and workshops be organized for teachers to keep them abreast of the use of advance organizer teaching strategies.

### INTRODUCTION

Effective teaching and learning are at its best when students are actively involved in a variety of learning activities in which they are challenged to think creatively about what is to be learned. Awotua-Efebo (2005) noted that teachers have the potentials of enhancing the quality of education by bringing life to the curriculum and inspiring students towards curiosity and self-directed learning. On the other hand, teachers can also degrade the quality of education through error, laziness, cruelty or incompetence (Clark, 1995:3).

Even the best curriculum and the most perfect syllabus would remain dead unless transformed to life by teachers utilizing appropriate methods in the delivery process. Therefore, to make teaching interesting, vital and lively the teacher should use a combination of methods, devices and techniques to add colour to classroom teaching (Singh & Nath, 2008:225). Therefore, in any teaching and learning situation, it is the teacher's task to ensure that learning becomes efficient and effective so as to enable the students to discover their full potentials (Gbamanja, 1991).

According to Okuoyibo (2010) hearing impairment is a generic term, which describes any condition that reduces the hearing acuity of an individual and makes it impossible for his/her to perceive and interpret auditory signals (sounds). To him, this condition arises when there is any disorder affecting the auditory system which includes the ear, the auditory nerve and the auditory cortex. Hearing impairment varies from person to person depending on the following factors:

- the degree or level of impairment
- the time of onset of impairment

- the place of impairment

In the words of Okuoyibo (2006), when hearing impairment affects an individual, its major impact is on language and communication which serve as main vehicles for transfer of knowledge from one to another. If communication becomes impaired as in the case of the child with hearing impairment, the process of educating such child automatically becomes difficult and less effective.

Although, the National Policy on Education (2004) can serve as an instrument of hope for the hearing-impaired children. According to the policy, government shall provide adequate education for all persons with special needs in order that may fully contribute their own quota to the development of the nation. However, Mark (2005) noted with dismay when he aptly noted that ‘despite these efforts, special need education still has the problem of not having the policies implemented.

In the process of teaching the hearing impaired students, Meziobi & Birabil (2008) suggest that the teaching-learning environment needs to be arranged in such a way that the classroom will be conducive for learning and the teacher be equipped with a variety of experiences so as to contribute effectively in the classroom situation. No wonder then that Gbamanja (1997) opined that communication involves a fusion between sound academic knowledge of pedagogical principles which are complex and varied.

In particular, the lecture method allows a great deal of information to be passed on to learners and it favours handling of large classes. In spite of these advantages, the lecture method does not seem to stimulate students’ innovation, inquiry and scientific attitude. It rather encourages students to cram facts which are easily forgotten (Okwilagwe, 2000). Furthermore, Adeyemi (2003) in his study, found that the lecture method is inappropriate and ineffective for achieving the definite objectives of social studies programme in particular. He stressed that there was therefore, a need to search for alternative strategies that would be more suitable and efficient for promoting the level of achievement and retention in secondary school social studies beyond contemporary limits and to the satisfaction of the current social studies’ curriculum requirements.

Advance organizer as a concept was seen by Long-Crowell (2014), as a tool to introduce the lesson topic and illustrate the relationship between what the students are about to learn and the information they have already learned. Mayer in Edutech Wiki (2014) also described an advance organizer as information that is presented prior to learning and that can be used to organize and interpret new incoming information. This view is in line with those of Esu and Iyang-Abia (2004) who noted that advance organizer refers to the process of communicating well in advance, the way in which a lesson will be organized to improve students’ comprehension and ability to recall and apply what they learnt. Similarly, Mezieobi, Reggi-Fubara and Mezieobi (2008) observed that an advance organizer is an instructional mode in which what to teach is communicated by the teacher to the students in advance of the actual teaching session to guide them obtain facts or information related to the learning content.

These organizers are introduced in advance of learning itself, and since the substantive content of any given organizer or series of organizers is selected on the basis of its suitability for explaining, integrating and interrelating the material they preceded, this strategy simultaneously satisfies the substantive as well as the programming criteria for enhancing the organization strength of cognitive structure (Ausubel, 1960).

Perhaps, with the application of this strategy, learners will be more involved in the teaching and learning process. To underscore these points, the present student focus on the effects of advance organizers on hearing impaired students' achievement and retention in social studies.

### **Statement of the Problem**

In spite of the importance of social studies in our educational system, students' performance in the subject shows growing decline in the junior secondary certificate examinations (JSCE) in Nigeria (Yusuf, 2005). The hearing-impaired students in Rivers State are not excluded. Perhaps, this might not be unconnected to the fact that hearing-impaired children come to school without language.

Again, apart from shortage of specialist teaches in social students and that of special education in Rivers State. It is disheartening that most teachers in the Nigerian social studies classroom still use the old teacher-centred approach in delivering their lessons not minding its long time negative effect of engaging the young learners in rote memorization of concepts, difficulty in understanding the subject, poor academic achievement, poor attitude and value of the subject as well as failure to develop the relevant skills that meet the current needs and demand for vibrant, talented, intelligent and creative graduates (Nkire and Imo-Obong, 2018).

As observed by Ajobiwe (2014) that an average disabled person progress more slowly in environmental understanding, language, social and motor development than the non-disabled child. This might not be unconnected with the views of Adedirim and Alaka (2005) that the hearing-impaired child experiences short attention span, poor comprehension, distraction, poor performance, isolation from others, all of which exert negative influence on his academic progress. In order to make him/her derive maximum benefit from educational setting, the class teacher need to employ or utilize the critical thinking generating methods which are desired in effective social studies teaching-learning setting. Therefore, this paper, sought to find out the effects of advance organizers teaching strategy on hearing impaired achievement and retention in social studies.

### **Aim and Objectives of the Study**

The aim of this study is to investigate the effect of using advance organizers as a teaching strategy on hearing impaired students' achievement and retention in social studies. Specifically, the objective of the study attempts to:

1. find out the difference in the achievement means scores of hearing-impaired students taught social studies with advance organizers and those taught without advance organizers.
2. determine whether gender difference affect hearing impaired students' use of advance organizers in learning social studies and those taught without advance organizers in social studies achievements?
3. assess the retention abilities of students taught social studies with the use of advance organizer.

### **Research Questions**

The following research questions shall be answered in this study:

1. What is the difference in the achievement mean score of hearing-impaired students taught social studies using advance organizers and those taught without advance organizers?
2. How do male and female hearing-impaired students taught with advance organizers differ from those taught without advance organizer?

- To what extent do the hearing-impaired students taught with advance organizer differ in their retention abilities in social studies?

### Hypotheses

The following null hypotheses (Ho) guided the study and was tested at 0.05 level of significance.

- There is no significant difference between the achievement of students who were taught with advance organizers and those taught with lecture method.
- The pretest and posttest achievement mean scores of male and female students in the experimental and control group do not differ significantly.

### Methodology

This study adopted a pretest-posttest group quasi experimental design. According to Nwankwo (2013) quasi experimental design is a study in which some threat to validity cannot be properly controlled because of unavoidable situation associated with the study when human beings are used for experimental study. The population of the study comprised the three special junior secondary school one (JSS 1) students of Rivers State. As at the time of study there were 104 year 1 students in the three special secondary school in this area (2019/2020 academic session). The sample size for the study was 40 junior secondary school one (JSS 1) students drawn with the use of simple random sampling techniques, 20 male and 20 females were involved in the study. They were placed into experimental and control groups respectively. The instruments used for data collection were a multi-choice items questionnaire titled 'Social Studies' Achievement Test' (SOSAT) developed by the researcher.

The instrument of the study was subjected to face and content validity by two experts. The reliability of the instrument was tested using 20 respondents outside the sample size but equivalent in all respect using test-retest method, Cronbach's Alpha reliability method was used and a reliability coefficient of 0.85 was obtained. This was considered adequate for the study. The researchers used two qualified social studies teachers as assistants in administering the questionnaires to the respondents. Mean and standard deviation were used in analysing the research questions while t-test was used in analysing the hypotheses at 0.05 level of significance.

### Results

**Research Question One:** What is the difference in the achievement mean score of hearing-impaired students taught social studies using advance organizers and those taught with lecture method?

**Table 1: Mean and Standard Deviation on the Pre-test and Post-test responses of Students taught with advance organizer and lecture method**

Groups	N	$\bar{x}$	SD	Mean Diff
Experimental group (Advance organizer and Lecture Method)	20	9.65	1.70	12
Control group (Lecture method only)	20	9.05	1.50	

The result in Table 1 shows that the mean scores of the students taught with advance organizers and lecture method were 9.65 (SD = 1.70) and 9.05 (SD = 1.50) respectively for student taught with lecture method only. This means that the students performed better when taught with advance organizers and lecture method than those taught with lecture method only. Hence advance organizer has positive effect on students' academic achievement in social studies.

**Research Question Two:** How do male and female hearing-impaired students taught with advance organizers differ from those taught without advance organizer?

**Table 2: Mean and Standard Deviation of the Students' Pre-test and Post-test based on gender and group**

Groups	Type of test	Gender	N	Mean		SD		Difference in score	Total	
				Male	Female	Male	Female		Male	Female
Experimental group	Pre-test	M & F	20	9.55	9.0	2.35	2.45	11	191	180
	Post-test	M & F	20	14.15	13.05	5.04	1.29	22	283	261
Control group	Pre-test	M & F	20	9.85	8.40	1.35	1.64	29	197	168
	Post-test	M & F	20	12.0	10.94	1.29	1.39	21	240	219

Table 2 shows that mean scores of males in the experimental group are 9.55 (pre-test) and 14.15 (post-test) while that of the control group are 9.85 (pre-test) and 12.0 (post-test). Mean scores for females in the experimental group are 9.0 (pre-test) and 13.05 (post-test) while that of the control group are 8.40 (pre-test) and 10.94 (post-test). A critical look at the table shows that in all the groups, the males had a higher mean score than their female counterparts.

**Research Question 3:** To what extent do the hearing-impaired students taught with advance organizer differ in their retention abilities in social studies?

**Table 3: Mean and standard deviation on the differences in the retention abilities of the experimental and control groups**

Groups	N	$\bar{x}$	SD	Mean Diff
Experimental group (Advance organizer and Lecture Method)	262	13.10	2.96	34
Control group (Lecture method only)	228	11.40	2.70	

The result in Table 3 shows that the mean retention scores of the experimental group are 13.10 (SD = 2.95) and 11.40 (SD = 2.70) for the control group respectively. From the above result, it can be deduced that the students taught social studies using advance organizers with lecture method (experimental group) retained more information than those taught with lecture method only (control group).

**Hypothesis One:** There is no significant difference between the achievement scores of students who use advance organizers together with lecture method and those who use only lecture method in learning social studies.

**Table 4a: Summary table of correlated samples t-test analysis on pre-test and post-test scores on advance organizer and lecture method**

Strategy	Type of test	$\Sigma x$	$\Sigma x^2$	$\bar{x}$	S	N	r	t-cal	Df	$\alpha$	t-crit	Decision
Advance organizer	Pre-test ( $x_1$ )	176	1604	8.8	1.70	20	-51.75	10.12	40	.05	2.021	Reject $H_0$ $p < .05$
	Post-test ( $x_2$ )	275	3817	13.75	1.37	20						

From the above Table 4a, it is observed that the mean score of 13.75 for the post-test is higher than the pre-test mean score of 8.8. In addition, when tested for significance difference, the calculated t-value is 10.12 which is greater than the critical t-value of 2.021 at 0.05 level of significance ( $t = -51.75$ ,  $p < .05$ ). This means that the null hypothesis was rejected and the alternative hypothesis accepted.

**Hypothesis Two:** The pretest and posttest achievement mean scores of male and female students in the experimental and control groups do not differ significantly.

**Table 4b: Summary table of correlated samples t-test analysis on pre-test and post-test scores on lecture method**

Strategy	Type of test	$\Sigma x$	$\Sigma x^2$	$\bar{x}$	S	N	r	t-cal	Df	$\alpha$	t-crit	Decision
Lecture method	Pre-test ( $x_1$ )	181	1681	9.05	1.50	20						
	Post-test ( $x_2$ )	229	2657	11.45	1.36	20						

Table 4b shows that the pre-test and post-test scores of students taught with lecture method are 9.05 and 11.45 respectively. It also shows that the calculated t-value is 6.0 which is greater than the critical t-value of 2.021 at the degree of freedom of 40 at 0.05 level of significance. This means that the null hypothesis is rejected while the alternative is upheld applying that significance difference was not noticed.

In all, calculated t-value for advance organizer is 10.12 with the critical value of 2.021 and the calculated t-value for lecture method is 6.0 while that of critical t-value is 2.021. This means that advance organizer has significant effect on the academic performance of the students in social studies.

**Table 5: Summary table of independent sample t-test analysis on pre-test and post-test based on gender**

Group	Gender	$\Sigma x$	$\Sigma x^2$	$\bar{x}$	N	t-cal	Df	$\alpha$	t-crit	Decision
Control group	Male and female	181	1681	9.05	20	0.63	40	.05	2.021	Accept $H_{0p}<.05$
Experimental group	Male and female	176	1604	8.8	20					

The result in Table 5 reveals that the calculated t-value is 0.63 while the critical t-value at degree of freedom of 40 at 0.05 level of significance is 2.021. Since the calculated t-value (0.63) is lower than the critical t-value (2.021), the null hypothesis that male and female in the experimental and control group do not differ significantly is therefore upheld (accepted).

## DISCUSSION

The study investigated the effects of advance organizers teaching strategy on hearing impaired students' achievement and retention in social studies in Rivers State, Nigeria. The findings of the study as shown on tables 1 and 4 revealed that there is significance difference in the level of academic performance of social studies students exposed to advance organizer than those in lecture method. The calculate t-cal of 10.12 is greater than the t-critical of 2.021. These findings are in agreement with that of Piaro, Birabil and Awotua-Efebo (2018) who worked on computer-based advanced organizer. Their findings reveal that computer-based advance organizer improve students' academic performance than those exposed to conventional method. Also, Tables 2 and 5 on students exposed to advance organizer based on gender revealed that there was significant difference between the male and female academic performance. The calculated t-cal of 0.63 is less than t-crit of 2.021. These findings are in agreement with Ekenobi (2016) that conducted a study on effect of advance organizers strategies on chemistry students' cognitive achievements and retention in redox reaction in Obio-Akpor, Rivers State. Lastly, Table 3 on retention ability of the experimental and control groups show that the experimental group has a mean of 13.10 with SD of 2.95 while that of control group has a mean

of 11.40 and SD of 2.70. From the above result it can be deduced that students taught social studies using advance organize were able to retain more information than those taught with lecture method. This finding is in agreement with Leming (2013) who saw retention abilities to be dependent on the use of effective review practice that are widely supported by research. To him, students who receive the advance organizer instructional approach have a higher retention over time.

## CONCLUSION

Based on the findings of this work, the following conclusions were made:

1. Advance organizers work well with conventional method as a combined strategy to bring about higher performance among the hearing-impaired students in social studies.
2. The use of advance organizers indicated a significant gender difference to learn social studies, in favour of male students.
3. It was also noticed that the use of advance organizers promoted higher rate of retention ability.

Therefore, joint effect by the government, school administrators, teachers, parents, students and non-governmental organizations are required to give the subject a balance acceptance with the use of advance organizers at all levels of education, including the non-formal sectors.

## RECOMMENDATIONS

The following recommendations emerged from the study:

1. Teachers should be encouraged to use advance organizer strategy alongside the conventional method in teaching social studies.
2. The teacher training institutions should also make the use of advance organizers part of the social studies teacher education curriculum.
3. The use of total communication should be the best option rather than sign language only, in teaching the hearing-impaired children.
4. Regular seminars, in-service training conferences and workshops should be organized for social studies teachers on the use of advance organizers. This could be done by government through the services of different professional bodies or organizations.
5. Authors or textbook writers on social studies should generally reflect the background of social studies a typical Nigerian society so that the hearing-impaired children will not be confused.
6. Policy makers and curriculum developers should see the results of this study as a way to advocate for the use of advance organizers by teachers.
7. Teachers of social students should explore the use of local materials from the immediate environment of the learner to teach various concepts in social studies, so that the hearing-impaired students will be familiar with the subject.

## REFERENCES

- Abdulahi, A. (1980). The effect of behavioural objectives on learning when used as advance organizers in a high school chemistry instruction. *The West African Journal of Education and Vocational Measurement*, 5(1), 27 – 31.

- Adediran, D. A. & Alaka, A. S. (2005). Managing children with hearing impaired in the classroom. In T. C. Obani (Ed.) *Classroom management strategies for special needs children*. Ibadan: Glory-land Publishing Company.
- Ajobiewe, T. (2014). *Management of disability in the family and community*. Ibadan: Teton Educational Services.
- Amasuomu, J. O. M. & Obomanu, B. J. (2002). Advance organizers in technological instructions: Its effect on students' academic achievement. *Nigerian Journal of Empirical Studies in Psychology and Education (NJESPE)*, 1(6), 23 – 29.
- Ausubel, D. P. (1960). The use of advance organizer in the learning and retention of meaningful verbal material. *Journal of educational psychology*, 55, (1), 267 – 272.
- Awotua-Efebo, E. B. (2005). *Effective teaching: Principle and practice*. Port Harcourt: Paragraphics.
- Clark, M. C. (1995). *Thoughtful teaching*. London: Cassell.
- Dawson, C. (2000). Upper primary boys and girls interest in science: How they changed since 1980? *International Journal of Science Education*, 22(6), 557 – 570.
- Edutech Wiki (2014). *Advance organization*. Retrieved June 30, 2019 from <http://www.edutechwiki.unige.ch/en/concept-learning>.
- Ekenobi, T. N. (2016). *Effect of advance organizers strategies on chemistry students' cognitive achievements and retention in redox reaction in Obio/Akpor, Rivers State*. An Unpublished Ph.D. Thesis, University of Port Harcourt.
- Esu, A. E. O. & Inyong-Abia, M. E. (2004). *Social studies: Technologies, methods and media*. Port Harcourt: Double Diamond Publications.
- Federal Republic of Nigeria (2004). *National Policy on Education (4<sup>th</sup> Ed.)* Federal Ministry of Education, Lagos, NERDC Press.
- Gbamanja, S. P. T. (1991). *Essentials of curriculum and instruction: Theory and practice*. Ado-Ekiti: Hamaz Global Publishing Co.
- Gbamanja, S. P. T. (1997). *Curriculum development and implementation: New strategies for the years, 2000 plus*. Port Harcourt. Paragraphics.
- Leming, J. S. (2003). Ignorance activist: Social change, “higher order thinking”, and the failure of social studies. In J. S. Leming, L. E. Ellington, & K. Porter (Eds), *Where did social studies go wrong?* Washington, D. C.: Thomas B, Fordham Foundation, 124 – 146.
- Long-Crowell, E. (2014). *Advance organizers in the classroom teaching: Strategies and advantages*. Retrieved July 24, 2019 from <http://www.education-portal.com/academy/lesson/advanced-advantages.html#lesson>.
- Mark, M. L. (2005). Basic administrative constraints to the implementation of special education policies in Nigeria. In T. C. Obani (ed) *Classroom management strategies for special needs children*. Ibadan: Glory-land Publishing Company.
- Mezieobi, K. A., Fubara, V. R. & Mezieobi, S. A. (2008). *Social studies in Nigeria: Teaching methods, instructional material and resources*. Owerri: Acadapeak Publishers.
- Mezieobi, S. A. & Birabil, S. T. (2008). Strategies for effective communication in the teaching of social studies to the hearing impaired children in Rivers State. *The National Association of Nigeria Educators*, 14(6), 60-67.
- Nkire, F. O. and Imoh-Obong, I. I. (2018). Effect of learner's activity teaching competence on social studies teacher in upper basic students' academic achievement in Akwa Ibom State, Nigeria. *Nigerian South-East Journal of Social Studies and Civic Education*. 11(6), 16-21.
- Okuoyibo, J. M. (2006). Educating the child with hearing impairment: The place of the educational audiologist. In T. Adelowo, N. Osatuyi & T. Ajobiewe (Eds.) *Special Education in Nigeria: A search for new direction*. Ibadan, Gloryland Publishing Company.



- Okuoyibo, J. M. (2010). The hearing-impaired child in the regular school. In T.C Obani (Ed.) *Teaching pupils with special educational needs in the regular classroom*. Ibadan, Gloryland Publishing Company.
- Okwilagwe, .E. A. (2000). Modern trends in secondary school geography teaching. In I. Ayodele (Ed). *Teaching strategies for Nigerian secondary schools*. Powerhouse, Press and Publishers.
- Piaro, G., Birabil, S. T. & Awotua-Efebo, E.B. (2018). Computer-based advance organizer and students' academic performance in selected bible schools in Rivers State. *International Journal of Multidisciplinary Research and Development*. 5(5) p.240 – 247.
- Singh, Y. K. & Nath, R. (2008). *Values education*. New Delhi: APH. Publishing Corporation.
- Yusuf, A. (2005). *Effects of cooperative instructional strategy on students' performance in social studies*. Retrieved on 10<sup>th</sup> April 2010 from [Musero.org.ng/publications.htm](http://Musero.org.ng/publications.htm).