

Effects Of Demonstrative And Discovery Teaching Strategies On Senior Secondary School Two (S.S.2) Students' Achievement In Oral English In Bayelsa State

Bokolo, Faith,

Department of Educational Foundations,
Isaac Jasper Boro College of Education,
Sagbama, Yenegoa, Bayelsa State, Nigeria

Uwah, Idongesit Victor,

Dept. Educational Psychology, Guidance
& Counselling, Port-Harcourt University,
Rivers State, Nigeria

Dr. Simeon, Norman

Department of Educational Foundations,
Isaac Jasper Boro College of Education,
Sagbama, Yenegoa, Bayelsa State, Nigeria

ABSTRACT

The researchers investigated the effects of Demonstrative and Guided Discovery teaching strategies on Senior Secondary School Two (2) students' achievement in Oral English in Bayelsa State. A quasi-experimental design approach was adopted, using a sample of Sixty (60) students comprising of both male and female from Yenagoa Local Government Area of Bayelsa State. Data collated were analyzed using mean standard deviation and the Analysis of Covariance (ANCOVA). This research was guided by Four (4) research questions and hypothesis. The instrument used for data collection was the Oral English achievement test (OEAT), The instrument contained 25 multiple choice items marked over 100 which were standardized. KR20 was used to determine a reliability coefficient of 0.95. The test was based on human sound system. The result analyzed showed among others that there was a significant difference ($P=0.000<0.05$) between demonstrative and discovery, and demonstrative and conventional methods of teaching. On the other hand, no significant difference existed ($p=0.314>0.05$) between discovery and conventional method of teaching. The significance difference observed between the various teaching methods is indicative that the demonstrative method is the most effective in the teaching of Oral English. Some recommendations were made on enhancing Oral English language skill acquisition such as provision of e-learning facilities in schools, continuous education for Oral English teachers among others.

Keywords: Achievement, Teaching Strategy, Traditional Strategy, Conventional Strategy and Guided Discovery Strategy.

INTRODUCTION

English language was first introduced to Nigeria in the 19th century by colonial masters and has eventually become the official language. English language is no longer the monopoly of the English people but serves as an effective means of promoting our cultural identity in Nigeria being a multilingual nation. Corroborating this assertion is Fakeye (2006), claimed that English language affords the various socio-ethnic groups in Nigeria to be able to communicate effectively. Today in Nigeria, the importance of English language cannot be denied nor ignored since a working knowledge of English language is necessary for appointment into political offices, business organisations, teaching profession, mass media and other frontline positions in various service industries. Being the lingua France of Nigeria, English Language is globally recognized as a language of science as well as the all-influential World Wide Web and other electronical devices are in English first, before being made available in other languages. Unfortunately, Obinegbo (2011) asserted that majority of Nigerian students do not possess partial mastery of the prerequisite skills and knowledge necessary for proficiency in English language.

In the Nigerian education system, English language serves as a core subject as well as a medium of instruction. Despite the importance of English language, Onabamiro (2005) claimed that it is fashionable for most students while they are yet in primary and secondary school, aspire to pursue careers in computer science, Economics, Microbiology, Engineering, Medicine or Law. He added that a Credit pass in English language is a compulsory requirement to almost every profession. Students are expected to have at least a Credit pass in English before gaining admission into tertiary institution.

Consequently, results obtained from WASSCE has shown that over a quarter of students that sat for the examination performed below the necessary grade point in English language (Uwadiae, 2010). Also, Okpala (2011) reported that 80% of the 2010 November/December Senior Secondary School Examination failed in English language. According to a Chief Examiner Report of some of these examination bodies, one of the problem students have in English is oral component. Among the four basic skills of English which includes reading, writing, listening and speaking, the Oral skill is considered to be very important as it is seen as the wheel through which the other three skills of English thrives. The amount of questions and marks allocated to oral English test in various public examination question paper further shows the importance of oral English in English language. As important as the oral English may be, a casual observation reveals that it is a part of English language that teachers give little attention to when teaching. It is also observed that it is the part that students pay less attention to in their study of English language.

Moreover, oral language acquisition has a profound impact on children's preparedness on their success through their academic careers. It is true says Connie *et al* (2008) that if students do not have the ability to express their ideas orally, they will not be able to express their ideas in writing. Hence, teachers adopt different teaching strategies such as Demonstrative, Guided Discovery and Conventional methods in achieving teaching objectives.

Additionally, Duch (2002) described demonstrative strategy as an instructional strategy that challenges students to “learn how to learn”, working cooperatively in groups to seek solution to real world problems. Teachers and scientist make use of this strategy attempting to translate theory into practice (Adufe, 2005). On the other hand, the guided discovery is a process in which students are provided with direction and freedom in the classroom. Instead, the would-be instructor is seen as a facilitator, mentor, coach or consultant. Teacher provides coaching and modeling by using guided discovery method (Mayer, 2004, p.15). However, teachers who have experimented with guided discovery learning stated that they dislike the approach because it is not feasible with increased pressure to cover sufficient content for end of year high stakes test (Masteroperiet *al*, 2007, p.35). The traditional instruction as the name implies, focused on how the instructor teaches. In this model, class periods are lecture based and involves note taking. It is expected that students will answer questions generated by their teacher (Shungar&Tekkaya, 2006).

According to De Cecco and Crawford (1977), achievement is the expectancy of finding satisfaction in mastering challenging and difficult performances. In addition, Yelon, Weinstein & Weener (1977) expresses achievement as the successfulness of an individual, while another source Smith and Hudgins (1964:95) say that achievement is to do ones best, to be successful, to accomplish task regarding skill and effort to be recognized by authority. In teaching English Language, although teachers use various teaching methods to encourage their students to speak but seem to be failing in obtaining the accurate level of achievement due to usage of inappropriate test. Teachers use diagnostic test more often than achievement test and placement test in order to assess students level of achievement in oral English.

From the foregoing, although many studies have been carried out in improving achievement in English language, not much has been done in the area of Oral English achievement in relation to teaching methods. Studies have found out that English language focuses on writing and reading skills. Few studies found Oral English as being theoretical in nature, thereby lacking empirical basis. However, it is necessary that Oral English should be given its pride of place in order to enhance achievement by learners of the language.

English Language is vital to the socio-economic, political and educational development in Nigeria. As a result of this importance, students are required to have at least a credit pass in the subject before gaining admission to tertiary institutions in the country. Despite the importance of this subject, thousands of Nigerian students are not performing well in it both in school and public examination. According to Chief Examiner Reports of some of these examination bodies, one of the major problem students have in English, is their deficiency in oral English Language.

A number of factors have been discovered by researchers as being responsible for student's deficiency in Oral English. Chief of these are some of the teaching methods used in teaching Oral English.

Therefore, the study investigated the effects of the Demonstrative and Guided Discovery teaching strategies on Student's achievement in Oral English Language in Bayelsa State.

As a result of these, the specific objectives of the study are to find out;

1. The effect of demonstrative and discovery teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared by their pretest and post-test scores
2. The effect of demonstrative teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared by the control group.
3. The effect of discovery teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared by the control group.
4. The effect of the various teaching methods on senior secondary school two student's achievement in Oral English in Bayelsa State.

The following research questions are also asked to guide the researcher in the course of the study;

1. What is the effect of demonstrative and discovery teaching strategies on senior secondary school two student's achievement in oral English in Bayelsa state as compared by their pretest and post-test mean scores?
2. What is the effect of demonstrative teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared with those in the control group?
3. What is the effect of discovery teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared with those in the control group?
4. What is the effect of the various teaching methods on senior secondary school two student's achievements in Oral English in Bayelsa State?

RESEARCH QUESTIONS

The following research question were posed to guide the study:

1. What is the performance mean score in the Pretest and Posttest of the students taught through the demonstrative and discovery teaching method?
2. What is the performance mean scores of students taught using demonstrative and conventional method?
3. What is the performance mean scores in the pretest and posttest of the students taught using discovery and those taught through conventional method?
4. What is the mean score of students taught Oral English using the various methods (demonstrative, conventional and discovery method)?

HYPOTHESES

- Ho₁: There is no significant difference between the mean performance of those taught Oral English through the demonstrative and discovery teaching method.
- Ho₂: There is no significant difference between the performance mean scores of students taught Oral English using the demonstrative method and those taught using conventional method.
- Ho₃: There is no significant difference between the performance mean scores of students taught Oral English using discovery and those taught using conventional teaching method.
- Ho₄: There is no significant interaction effect of all the various groups on students' achievement in Oral English .

METHODS

The study used the quasi-experimental design. It comprised of the Demonstrative group (treatment), Discovery group (treatment) and the Conventional group (control). The population of the study consist of all SS II students in Bayelsa State. The sample size for this study was 60 students comprising of male and female students. Simple random sampling technique was employed in the study. The research instrument used for the study was Oral English Achievement Test (OEAT) which served as pre-test and post-test instrument. The instrument contained 25 multiple choice items to be marked over 100 which were standardized. KR20 was used to determine a reliability coefficient of 0.95. The test was based on human sound system which included vowel sounds, consonant sounds, diphthongs, stress pattern of words and emphatic stress.

The methodology involved using one or more elements of different teaching methods and assessment during in-class activities. The treatment was personally administered by the researchers including the test administration. The treatment for all the groups lasted for Four (4) weeks. The students were taught the same syllable content. Specifically, those in the demonstrative group were exposed to more illustrative examples and active communication from the teacher. Those in the discovery group were guided on content area to be explored, while those in the conventional group were passively involved in class activity. Mean, t-test and Analysis of Covariance (ANCOVA) was used in the analysis. The mean and standard deviation were used to answer all the research questions, significance value associated with ANCOVA was used to test hypothesis 1 and 4.

RESULTS

Research Question 1

What is the effect of demonstrative and discovery teaching strategies on senior secondary school two student's achievement in oral English in Bayelsa state as compared by their pretest and post-test mean scores?

Hypothesis 1

There is no significant difference between the mean performance of those taught Oral English through the Demonstrative and Discovery teaching method.

Table 1: Shows ANCOVA analysis of the effect of demonstration and discovery teaching strategies on students' achievement in Oral English language.

Group		No	X	S.D
Demonstration	Pretest	20	43.20	8.66694
	Posttest	20	73.95	11.71807
Discovery	Pretest	20	31.80	10.33950
	Posttest	20	54.25	5.68354

Test of Between Subject Effect						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Result
Corrected Model	3882.950	2	1941.475	22.304	.000	Significant (Reject H_{01})
Intercept	9250.290	1	9250.290	106.271	.000	
Pretest	2.050	1	2.050	.024	.879	
Teaching methods	2741.945	1	2741.945	31.500	.000	
Error	3220.650	37	87.045			
Total	171456.000	40				
Corrected Total	7103.600	39				

Source: SPSS 23 Model Summary Output

Table 1 reveals that pretest mean for demonstration and discovery methods were 43.20 and 31.80 respectively, while their posttest mean scores were 73.95 and 54.25 respectively. It is seen that students in both groups performed significantly better after being exposed to the treatment. Hence, the effect of these two strategies can be said to be positive on students' achievement in Oral English. Although the demonstration method has a higher means score by 19.7 difference.

Also, the test of between subjects effects reveals that computed F of 31.50 is statistically significant at 0.05 alpha. Hence, since the significance value ($P=0.000$) is less than 0.05, the null hypothesis is rejected and the alternative accepted because $F(1,37) = 31.50$ $p < 0.05$. This means that there is a significant difference between students taught Oral English using demonstration method and those taught using discovery method

Research Question 2

What is the effect of demonstrative teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared with those in the control group?

Hypothesis 2

There is no significant difference between the performance mean scores of students taught Oral English using the demonstrative method and those taught using conventional method.

Table 2: Shows t-test of the analysis effect of demonstration and conventional teaching strategies on students' achievement in Oral English language.

Groups	N	$\bar{X}$	S.D.	Df	t.cal	Sig.	Result
Demonstrative	20	73.95	1.718	38	-7.374	.000	Significant
Control	20	52.40	5.789				(Reject H_{02})

Table 2 shows mean for those in the demonstration group was 73.95 while the control was 52.40. Their standard deviation value was 11.718 and 5.789 respectively. These mean values, indicate the fact that demonstration method has higher effect on students' achievement in Oral English with a difference of 21.55. The t-test value (-7.374) also shows significance $p=0.000$ which is less than the chosen alpha value of 0.05 at 38 degrees of freedom, the null hypothesis is rejected and the alternative hypothesis is accepted (as $t(38) = -7.374$, $p < 0.05$, 2-tailed). This means that there is a

significant difference between the performance mean scores of students taught oral English using the demonstrative method and those taught using the conventional method.

Research Question 3

What is the effect of discovery teaching strategy on senior secondary school two student's achievement in oral English in Bayelsa state as compared with those in the control group?

Hypothesis 3

There is no significant difference between the performance mean scores of students taught Oral English using discovery and those taught using conventional teaching method.

Table 3: Shows t-test analysis of the effect of discovery and conventional teaching strategies on students' achievement in Oral English language.

Groups	N	X	S.D.	Df	t.cal	Sig.	Result
Discovery	20	54.25	5.684	38	-1.020	.314	Not Significant
Control	20	52.40	5.789				(Retain H_{03})

Table 3 shows the mean for those in discovery group was 54.25 while conventional group has 52.40 and standard deviation value of 5.684 and 5.789 respectively. The mean value exposes the fact that discovery method has higher effect on students' achievement with a difference of 1.85 which is not so wide. Also, the t-test value (-1.020) shows significance of 0.314. Hence, since the p-value of 0.314 is greater than the chosen alpha value of 0.05 at 38 degrees of freedom ($p=0.314>0.05$), the null hypothesis is retained (as $t=(38) = -1.020$, $p>0.05$, 2-tailed). This means that there is no significant difference between discovery teaching method and conventional teaching method in students' achievement in Oral English language.

Research Question 4

What is the effect of the various teaching methods on senior secondary school two student's achievements in Oral English?

Hypothesis 4

There is no significant interaction effect of all the various groups on students' achievement in Oral English S.S. 2.

Table 4: Shows ANCOVA analysis of the effect of Demonstration, Conventional and Discovery teaching strategies on students' achievement in Oral English language.

Group		No	X	S.D	Achievement gain
Demonstration	Pretest	20	43.20	8.667	30.75
	Posttest	20	73.95	11.718	
Conventional	Pretest	20	34.20	9.839	18.2
	Posttest	20	52.40	5.789	
Discovery	Pretest	20	31.80	10.340	22.45
	Posttest	20	54.25	5.683	

Test of Between Subject Effect						
Source	Type III sum of Sq. Square	Df	Mean	F	Sig.	Result
Corrected Model	5718.723a	2	1906.241	27.750	.000	
Intercept	12794.670	1	12794.640	186.255	.000	Significant
Pretest	12.623	1	12.623	.184	.670	(Reject H ₀₄)
Teaching Methods	4366.747	2	2183.373	31.784	.000	
Error	3846.877	56	68.694			
Total	227008.000	60				
Corrected Total	9565.600	59				

Source: SPSS 23 Model Summary Output

The table shows mean performance of students taught using the various teaching methods (demonstrative, conventional and discovery method). The result reports a gain of [30.75, 18.2 and 22.45] exist for the various teaching methods(demonstrative conventional and discovery) used respectively in the groups. The result indicates that the demonstrative method yields higher performance followed by the discovery and the conventional method. Also, the ANCOVA test of between subjects effects reveals computed F of 31.784 is statistically significant at 0.05 alpha. Hence, since the significance value ($p=0.000<0.005$) is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted because $F(2,56) = 31.784$, $p < 0.05$. This means there is a significant difference between groups taught Oral English using the various teaching methods.

DISCUSSIONS

The analysis of students' achievement scores in Oral English as revealed by the post test in the use of demonstrative and discovery method has a mean gain in favour of the demonstrative method. In addition, the ANCOVA result on the first hypothesis reported that there was a significant difference between the mean scores of the demonstrative and discovery method. This implies that the demonstrative method is more effective in teaching Oral English. This finding cannot be in isolation because the demonstration method when used aroused students' interest in learning the oral sound system of English. Also, the researcher as a teacher is aware that at this level, the fact that students may not necessarily perform better if they are left alone would have enhanced the performance of those in the demonstrative group. This finding refutes that of Harry (2002) who noted that guided-discovery teaching strategy is appropriate at all levels of education.

The result on students' posttest performance mean score on the use of demonstrative and conventional method indicates a higher mean score gain in favour of the demonstrative method. Also, the t-test result on hypothesis 2 reports that there is a significant difference in the mean performance of students taught using demonstrative method and those taught Oral English using the conventional method. This indicates that the conventional method is more effective in Oral English. This reveals that without appropriate demonstration in teaching oral English, students will be less focused and will not achieve much. It could also be that students taught with the demonstration method enjoyed the lesson more causing them to give more attention to the lesson than those in the control group. This finding is in line with Ogundola (2007) who noted that students centered demonstration method was more effective in students' academic achievement.

From findings 3, the performance mean gains for discovery and conventional method also revealed a higher gain in favour of the discovery method although the difference is not very wide. This finding indicates that giving students task to carry out on their own concerning a particular topic cannot help them in any way. Although, these methods have improved students achievement in oral English, such achievement is insignificant. This finding may come as a result of students not being able to carry out independent or group discoveries and as such may limit their performance. The finding is a little bit expected by the researcher because considering the present situation especially in Bayelsa State, these category of students do not possess the prerequisite skills and knowledge in consideration of age and facilities, to make research on their own and come up with new ideas. However, Hake (1998) reported findings against the present one when he stated that discovery learning enhances problem solving skills.

Finally, the students' achievement scores in Oral English based on the posttest as a result of the use of Demonstrative, Conventional and Discovery methods showed a higher mean score gain in favour of the demonstrative method. This implies that the demonstrative method developed learners' interest more and motivated them for active participation which led to mastery of concept. Also, the ANCOVA result shows that there is a significant interaction effect between all the teaching methods on students' achievement in oral English Language. This finding implies that if all the methods are employed in teaching students at a time, their interaction effect will still be positive on the achievement of students in oral English.

Similarly, in a comparative study of all three methods (guided-discovery, traditional and demonstration model of instruction), Mayer (2014) observed that the discovery learning came in last. This observation is in line with this present study which has the demonstrative method with the most favourable outcome in relation to the conventional and discovery method used in the teaching of Oral English. Although Harry (2002) opined that the guided discovery teaching strategy is appropriate at all levels of education, contrarily the findings of this study indicates that in teaching of Oral English at SS II, the demonstrative method is most effective because it significantly outperformed those not taught with this model of instruction.

CONCLUSION

Conclusively, the study has enumerated and examined the effects of demonstrative and guided discovery method in the teaching of Oral English Language in secondary school in Bayelsa State, Nigeria. The research asserts that demonstrative teaching methods is the most effective method in enhancing Oral English skill acquisition and performance of students at secondary schools. This is followed by guided discovery learning strategy when compared to the conventional method of teaching Oral English. It was observed that the guided discovery did not significantly differ from the conventional method as both methods did not effectively capture and sustained the interest of the learner throughout the period of instruction. In comparison to the various methods of instruction (demonstrative, conventional and discovery) the demonstrative method is most effective as it captured and sustained the interest of the learners throughout the period of instruction. It has established that demonstrative method of teaching can be used to enhance student's performance in Oral English acquisition being a more effective in the teaching of Oral English.

RECOMMENDATIONS

With reference to the findings and conclusion of this study, the following recommendations were made.

1. Teaching for Oral skill acquisition is a very crucial issue in educational process. In order to maximize the gains of Oral language acquisition, Oral English teachers should adopt the demonstration strategy at all levels of educational institutions.
2. The demonstration strategy should be used by teachers in teaching Oral English skills.
3. Conferences, seminars and workshops should be organized by the educational authorities for in-service English teachers to retrain and keep them abreast of measures aimed at skill learning and acquisition in English language especially Oral English.
4. E-learning facilities in schools should be installed, new ones should be provided in adequate numbers to enhance Oral English skill teaching and learning. These should be provided by the government (Ministry of Education) at all levels, Parents Teachers Association (PTA) and other stakeholders.
5. Government authorities should ensure that schools are well equipped with the necessary instructional materials in teaching Oral English to facilitate the demonstration teaching strategy.

References

- Adunfe, W. (2005). The heart of teaching. Ijebu-ode: Lucky Odoni Nig. Enterprises.
- Connie, W., Roberta, S. and Patrice, G. (2008). Speaking of writing: The significance of oral language in English learners' literacy development. Teacher Writing Centre.
- De Cecco, John . P. and Crawford, M. R. (1974). The psychology of learning and instruction. Educational psychology New Jersey: Prentice HALL, Inc. Eaglewood Cliffs.
- Duch W, Grudzinski K., (2002). Meta-learning Via search combined with parameter optimization.
- Fakeye, D. O. (2006). ICT- assisted instruction and students vocabulary achievement in selected senior secondary schools in Ibadan. *Journals of Humanities in Education*. Vol. 1 (1) Pp. 14-21
- Harry, D. L. (2002). Fundamental skills of science: Observation. Eric digest. Columbus, Otti Eric clearing house for science, mathematics and environmental education. Ibadan.
- Mastropieri, M.A., Mcduffie, K.A., & Scrggs, T.E (2007). Co-teaching in inclusive Classroom; A Metasynthesis of qualitative research. *Exceptional children*. 79 (4), 392-416.
- Mayer R. (2004) "should there be a three-strike rule against pure discovery learning? The case for guided method of instruction" *American Psychologist* 59 (1) 14-19.
- Obinegbo, W. C. (2011). Psychological factors, classroom environment and teaching methods as correlates of senior secondary school students' learning outcomes in English reading comprehension in Ondo state. Unpublished M.Ed. Project. Dept. of ICEE. University of
- Ogundola I. Peter, Popoola A., and Oke J.O. (2010). Effect of constructivism instructional approach on teaching practical skill to mechanical related trade students in western Nigeria technical Collage. *Journal of International NGO*.
- Okpala, P. N. 2011. The registrar and chief executive report, national examination council (NECO).
- Onabamiro, A. T. (2005). Teachers' and students' factors as determinants of students achievement in mathematics. Unpublished M.Ed. Project. Dept. of ICEE. University of Ibadan.
- Shungur, S & Tekkaya (2006). Effects of Problem-based learning and traditional instruction on self-regulated learning. *The journal of Educational Research* 99 307-317.

Smith, L.M and Hudgins, B.B (1964). Educational Psychology, an application of social and behavioral theory. New York. Alfred A. Knopf.

Uwadaie. (2010). West African Examination Council Chief Examiner's report.

Yelon, S .L.,Weinstien, G.w., and Weener, P.D. (1977) . A teachers word. Psychology in the classroom. Tokyo: mc Grawhill, Inc.