# Effects of note-taking on the performance of junior secondary two students in literature in English in Bwari Area Council, Abuja.

By

- 1. Udogu Chizoba Pauline 2. Nwobi Esther Uchenna 3. Ezeanolue Aloysius Okwuchukwu 4. Onuoha Juliana Nwanneka 5. Nwali Ruth Nkechi 6. Chukwuma Eucheria Onyinye, 7. Agwuoke Stella Nkiruka.
- 1. Department of Arts and Social Science Education, Veritas University Abuja-Nigeria
- 2. Department of Arts and Social Science Education, Ebonyi State University Abakaliki-Nigeria
- 3. Department of Education, Nnamdi Azikiwe University Awka-Nigeria.
- 4. Department of Arts and Social Science Education, Ebonyi State University Abakaliki-Nigeria
- 5. Department of Arts and Social Science Education, Ebonyi State University Abakaliki-Nigeria
- 6. Department of Arts and Social Science Education, Imo State University. Owerri-Nigeria
- 7. Department of Arts and Social Science Education, Veritas University Abuja-Nigeria Corresponding Author: Nwobi Esther Uchenna

**Background:** Note-taking has its implications on students' learning outcomes, education performance and academic success, cognitive ability of learners to achieve as well as better understanding of knowledge.

**Aim:** To investigate the effects of note-taking on the performance of junior secondary two (JS2) students in literature.

**Setting:** The study was carried out among the junior secondary two (JS2) students in literature in English in Bwari Area Council schools, Abuja-Nigeria.

**Method:** This is quasi experimental research design and One-Sample t-test and Paired-Sample t-test were employed for data analysis.

**Results:** The findings revealed that that there is a significant difference between the students taught note-taking and those not taught note-taking at p $\leq$ =t-probability value of 0.00 and that there is no significant difference between the mean scores of the male and female students of the experimental group at p $\leq$ =0.95.

**Conclusion:** In order to bring about learning effective note-taking should be encouraged by teachers on the student. This is crucial because it makes the students rather actively involved them in their learning or in exploration of content, so that they can improve their performances in literature and education in general

**Keywords:** Note-taking, performance, junior secondary, students, literature in English

#### Introduction

# **Background to the Study**

Language is a system of communication which consists of a set of sounds and written symbols which are used by the people of a particular country, region or social group to share their thought, feelings and ideas. Language therefore is indispensable in any given society. According to Anigbogu, Mba and Eze (2001), language is a means by which human beings share ideas, feelings and emotions. Every language has its own literature. Language and literature are inseparable. Without language no literature would form.

Literature is described as a work of art expressed in a carefully selected language (spoken or written) which deals with the thoughts, concepts and ideas of an individual or a people. Talakcioglu (2003) saw literature as the creative production of the human mind couched in figurative language. For example, when an individual expresses his joys or sorrows effectively in language, literature is said to be in the making. It is the totality of man's action in his social environment. Literature makes language interesting and show cases peoples' culture, belief, history, events and lives. Akporobaro (2012) stated that literature in African languages is naturally the oldest and most predominant in Africa. This is because of its creativity, imagination and manipulation of language. The art of creativity has many dimensions such as the imaginative communication of experiences, the communication of ideas of significant human value and the heightened organisation of the resources of language towards the achievement of aesthetic effects. For junior secondary schools, literature in English is embedded in English studies which are one of the core subjects prescribed by the National Policy on Education (2014). English is one of the essential pre-requisites for further education in Nigeria as a credit in English language is a requirement for admission into Nigerian institutions of higher learning. But there are some factors that hinder the learning of this core subject. One of the factors can be attributed to poor academic achievement in literature in English.

Poor academic achievement in literature in English could be attributed to many factors among which teachers' perception and teaching strategy itself was considered by the researcher as an important factor. One of the major problems of teaching literature according to Ogunnaike (2002) is poor planning, poor pedagogy and poor presentation in the classroom. This, Ogunnaike affirms has affected students' attitude towards the subject resulting in poor performance. In related vein, Nwodo (2011) asserted that despite the fact that the study of literature offers learners the opportunity to be proficient in English, there is no dynamic and functional literature policy on ground. Nwodo (2011) argued that a well-planned literature curriculum will enhance students' performance and raise the standard of education in the country. Meanwhile, for students to perform well in their academics they should be able to take down what they have learnt from the literature in English class by using the four major skills, listening, writing, reading and speaking. Therefore, it is the duty of the teacher to teach the students how to take notes during lesson.

Note-taking is a process of recording information captured from transient source, such as oral discussion, reading and a lecture. Notes are used mostly to record events, capture information and several purposes (Hartley, 2002). Note-taking process facilities learning and enhances the cognitive ability of learners to achieve better understanding of knowledge. It also has its effect on learning outcomes and education performance and academic success. Hartley (2002) affirmed that empirical studies proved that note-taking is an important skill for students who use it mainly to implant the presented material in their mind. Note-taking performs a range of intellectual processes, such as making judgements, resolving issues and making decisions. Again, gender is one of the individual variable differences, because females value note-taking higher than males do. Other studies determine that compared with males, females produced notes in a more predictive, accurate and organized notes (Williams and Eggert, 2002).

Kitchenham & Pfleeger (2002) as cited in Rodriguez and Slate (2017) an increased interest in gender differences occurred between 1992 and 2002, particularly related to academic achievement, motivation, and knowledge development. Gender here refers to whether the learner is a male or a female. It is believed that girls are better than boys in linguistic skills of oracy, writing and grammar whereas boys excel in sciences and mathematics as well as any field that involves logical resources and problem solving. In view of this, Nash (1996) as cited in Akabogu (2002) stated that females tend to do better in test of verbal ability including such components as fluent reading. Many explanations have been put forward for the existence of gender gap in achievement. Dayioglu and Turut-Asik (2004) opined that women receive higher grades than men because they work harder and attend class more frequently. Young and Fisler (2000) have explained the gap by adhering to such factors as differences in course taking behaviour, classroom experiences and cognitive processing. Therefore, whether junior secondary two (JS2) students learning literature and note-taking will or counteract the learning efficiency due to their gender difference is a significant issue in this study.

## **Statement of the Problem**

In junior secondary schools in Nigeria, literature in English is embedded in English studies curriculum. But it was observed that some students in Bwari Area Council do not perform well in literature in English due to some factors, such as; some students hardly take notes when class discussion is ongoing. This is because of their inability to speak, to read and to write during class. When asked after lessons, they are unable to provide any evidence that they were in the class. This also affects their ability to acquire all necessary knowledge that needs to be learnt and internalize to reach the communicative competence. Some students do not copy notes at all and this reflected in the disjointed, pointless and unusual answers given to the assignment questions given to them.

Again based on personal observation, students find it difficult to form their notes at the end of the lesson without the help of the teacher which affects their ability to retrieve information at the end of the lesson. However, in Bwari Area Council, some students do not know the indicators of note-taking which affect them from taking down the important points during lessons. The challenge therefore will be thrown back to the instructors. They are to ensure the best ways to teach the subjects and make the learners to learn at ease in the midst of the heavy content that characterizes the two subjects in junior class. The teaching aspect also on the part of the instructors demands from him/her the skills necessary to be up and doing in order to meet up with the demands of literature class.

Another problem of poor academic performance of students in Bwari Area Council is that some parents of students in public schools do not provide the books prescribed for extensive reading in Junior Secondary Schools. For whatever reason, this may cause setbacks in the execution of literature in English studies curriculum. The teacher sought to use note-taking methods to give the students the necessary materials contained in the extensive reading texts. Therefore, the problem of this study is therefore: what could be the effect of note taking on the performance of junior secondary two (JS2) students in literature in English in Bwari Area Council, Federal Capital Territory?

# **Purpose of the Study**

This study sought to investigate the effects of note-taking on the performance of junior secondary two (JS2) students in literature. The specific objectives of the study are:

- 1. To determine the difference in the mean performance of the experimental group and that of the control group in note-taking achievement test.
- 2. To determine the difference in the mean performance of male and female students in the experimental group in note-taking achievement test.

# **Research Questions**

The following research questions were raised:

- 1. What is the difference between the mean performance of students of experimental group and those in the control group in note-taking?
- 2. What difference exists in the mean performance of male and female students in note-taking?

# **Research Hypotheses**

The study was guided by the following null hypotheses

**Ho1:** There is no significant difference between students taught note-taking and those not taught note-taking.

**Ho2:** There is no significant difference between the mean scores of the male and female students of the experimental group.

## Significance of the Study

The necessity of conducting this study was informed by the possible benefits, functions and importance of note taking for those who in one way or another deal with learning, teaching and researching. The study is considered important because the findings will be beneficial to; Stakeholders in the education sectors including the curriculum planners. It will benefit them in recommending literature texts that will be appropriate for the age and facilitate the acquisition of skills; writing, listening, speaking, reading and reading which form the bedrock for writing will be part of the learner's experiences.

Literature in English is an appropriate strategy for teaching the literature component of English studies curriculum. It means that children will benefit from it because it encourages the art of note-taking. It teaches the students moral values and critical thinking. It is used for entertaining the children. It helps them to read, write and take down notes when class is ongoing. Again, it teaches them the norms and culture of the society.

The findings of this study will also benefit the teachers who will teach their students the methods and indicators of note-taking which serves as a reference points to the students at the end of the class. Effective learning of note-taking in English studies could transcend other subjects of the curriculum where students need to take down notes. Finally, future researchers and scholars will benefit from this work because it will serve as a stepping stone for further research studies.

# **Scope of the Study**

The research was focused on the effects of note taking on the performance of junior secondary two (JS2) students in literature in English in Bwari Area Council schools. The research was limited to teaching note-taking to junior secondary two schools in Bwari Area Council. Also, the number of the student in these schools are large; the researcher restricted the study to only junior secondary two students (J S 2) where the note taking strategy was adapted in teaching literature. This was utilized to develop note-taking skills in the students. Other strategies such as students' reading and discussion played supportive roles during the treatment.

# **Operational Definition of Terms**

The following terms are defined as used in the study;

**Note-taking:** Students` taking down points in a sequential manner to remember what was taught from the story they listened to.

**Literature:** Any written/spoken work which has artistic or intellectual values which expose people's cultures, norms and belief of a particular society.

**Students' Performance:** The ability of students to give the summary of the story in the book "the Survival of an African Orphan" by mentioning the major characters, the setting of the text, themes and the moral lessons from the story.

#### **METHOD**

## **Research Design**

This study employed quasi experimental research design, aimed at finding out the effects of note-taking on the performance of junior secondary two students in literature in English in Bwari Area Council, Abuja. This type of design was therefore appropriate in this investigation because it employed experimental group (A) and control group (B) both group was chosen from junior secondary schools Bwari Area Council. (A) Junior secondary school Gaba was exposed to the effects of note-taking for teaching literature while group (B) Junior secondary school Bwari central was not expose to the effects of note-taking. The time for this experiment was six weeks of forty (40minutes) per week.

Pre-test Quasi Experimental Research Design

Groups (R)	Pre-Test	Treatment	Post-Test	
Experimental	T1	X	T2	
Control	TI	-	T2	

Source: Adapted from Campbell &Stanley (1970) and Kerlinger (1973) as cited in Nwogu (2006).

The table above shows the administration of the pre-test and post-test to the experimental and the control groups.

Key: T1 = Pre-test using Narrative Achievement Test (NAT).

T2 = Post-test Using Narrative Achievement Test (NAT).

X=Treatment of experimental group using Note-taking strategy.

=No treatment given to control group

# **Population of the Study**

The population for this study consisted of all Government Junior Secondary Schools in Bwari Area Council FCT, consisting of twenty six junior secondary schools from which the sample was selected. The choice of this research population was as a result of teachers of English having to teach literature within the ambit of English studies to junior secondary school students. This was to assist both the teachers and the students specially to have a pleasurable learning experience to enhance their performance in literature.

**Population Table** 

	NAME OF	YEAR OF	NO. MALES	NO.OF	TOTAL NO.
	SCH.	EST.		<b>FEMALES</b>	$\mathbf{OF}$
					<b>STUDENTS</b>
1	Bwari 1	2005	956	909	1865
2	Bwari	2005	1085	1094	2179
	Central				
3	Gaba	2015	128	106	234
4	Igu	2006	90	64	154
5	Kawu	2005	335	253	588

Source; FCT Universal Basic Education Board Bwari-Abuja

# Sample / Sampling Technique

The sample size was intact class of Junior Secondary School II students in Bwari Area Council. Junior secondary school students II in Gaba was used for experimental group while Junior Secondary School II in Bwari Central was used for control group.

Random sampling technique was utilized. They schools were arranged by location. The sample size for this study was one hundred and seventy and that was the total number of students in the intact classes of two JSS II students in Bwari Area Council. The schools were selected through random sampling without replacement. Assignment of one arm to experimental and control groups was achieved through simple balloting.

**Experimental Group** 

NAME OF SCHOOL	MALE	FEMALE	TOTAL
Junior Secondary School, Gaba	34	49	83

Source: School information

**School (B) Control Group** 

NAME OF SCHOOL	MALE	FEMALE	TOTAL
Junior Secondary School, Bwari Central	42 45	87	1

Source: School information

#### **Instrument for Data Collection**

The instrument that was used for collection of data was titled- a Narrative Achievement Test (NAT). It contained guided questions adapted from the literature text "The Survival of an African Orphan" for Junior Secondary School Book 2. The guided story centred on the ability of the students to identify the name of the author, settings of the literature text, the chief characters and minor characters, themes, plot and events in the story "The Survival of an African Orphan".

Based on the issues raised in the story, students can engage in discussion on moral lessons drawn from the story and also ask relevant questions for the teacher to clarify.

# **Validity of the Instrument**

The face and content validity of the instrument was ascertained by the researchers' supervisor and other experts in the Department of Arts and Social Science Education Veritas University, Abuja. Their observations and corrections yielded the final draft used for the study.

# **Reliability of the Instrument**

Test re-test reliability was used to determine the reliability of the items. The developed Narrative Achievement Test (NAT) was first administered to thirty students within the population, but outside the sample. This was to help the researcher know whether the questions in the instruments were clear. It was also to know how generate the results of the test would be to the population. The same instrument was used after two weeks' interval again. The two sets of data were collected and correlated using Pearson Product Movement Correlation Coefficient (PPMCC) 0.75 correlation coefficient was got which was high enough to determine the reliability of the instrument.

#### **Procedure for Data Collection**

The researcher obtained a letter of introduction from the Department of Arts and Social Science, Education, Veritas University, Abuja. Based on this need, the school time table was used and lesson periods were approved for the researcher in the school for the treatment. Narrative Achievement Test (NAT) was administered by the researcher to research samples in both the experimental and control groups as pre-test. The experimental group was taught on how to take notes when the story of the survival of an African orphan was narrated in the class during lesson, while the control group was taught the same story without taking notes when the teacher narrated the story. The treatment lasted for six (6) weeks. The post-test was administered to both experimental and control group to measure their level of achievement.

#### **Method of Data Analysis**

To answer the research questions, Descriptive Statistics and One-Sample t-test were employed at 0.05 level of significance. In testing the hypotheses, Paired-Sample t-test was employed to verify the existence of statistical evidence proving that the mean difference between the paired observations in the hypothesis is significantly different from zero. The level of significance adapted formed the basis or criterion for accepting or rejecting each of the null hypotheses. Prior to the application of treatment, a test of homogeneity was conducted to ascertain whether or not the two groups randomly selected for the study were homogenous in terms of their mean performance. The test was carried out using the students` pre-test scores. It was necessary to conduct this test to ensure that the compared groups were homogenous before the application of treatment and to also remove any form of research selection bias when selecting which group should be the control or the experimental group. If the groups were homogenous before the treatment application, then any observed variation in the mean performance between the two groups after the treatment would be a true effect of the treatment.

# **Descriptive table**

#### **Results**

# **Descriptive Statistics**

	N	Mean	Std.	Skew	ness	
	Deviation					
	Statistic	Statistic	Statistic	Statistic	Std. Error	
RAW SCORES OF PRE-TEST EXPERIMENTAL GROUP	83	44.6506	7.41362	.380	.264	
CONTROL GROUP OF PRE-TEST	88	42.9545	7.52911	.648	.257	
POST TEST EXPERIMENTAL GROUP FOR FEMALE STUDENTS	49	69.9592	9.41399	.150	.340	
POST TEST EXPERIMENTAL GROUP FOR MALE STUDENTS	34	70.0000	8.16497	.000	.403	
RAW SCORES OF POST TEST EXPERIMENTAL GROUP	83	71.3253	4.88965	.140	.264	
CONTROL GROUP OF POST-TEST	87	55.4713	4.63762	104	.258	
Valid N (listwise)	34					

The above table above discusses the descriptive nature of the data collected. The table shows the performance of the junior secondary students in note-taking of stories in literature. The students were accessed before the tutorial and also after the tutorial classes.

Before the tutorial classes, the mean value of 44.65 for pre-test experimental group shows that averagely, the students could perform within 45 per cent in note-taking of literature stories. This means that the best student within the group could perform within 45% of the expected outcome. When compared with the post-test experimental group, the result shows that with the average mean value of 71.33, the best performance of the students would be within 71 per cent of the expected outcome. In this, the researcher observed that a mean difference of 26.67 exist between the pre-test experimental group and the post-test experimental group. This mean difference explains that the tutorial class impacted greatly on the performance of the students by approximately 27%.

Also, with the Standard Deviation of 7.41 for the pre-test experimental group and 4.89 for the post-test experimental group (see table above), the result reveals that the performance of the students after the note-taking tutorials was more consistent than the era before the note-taking tutorials. With the difference of 2.52, the result shows that the note-taking tutorials impacted more than twice the earlier performance before the tutorials. On the performance of the students by gender, the result shows that averagely, the female gender performed almost same with their male counterparts. This is proved by their corresponding mean values of 69.96 (approximately 70 for females) and 70.00 for males. This shows that after the note-taking tutorials, the both gender performed up to 70 per cent of the expected outcome respectively.

#### **Analyses of Research Questions**

In this section of the chapter, the researcher discusses the research questions of the study as stated in chapter one in relation to the collected data. In order to properly analyse the research questions statistically, the One-Sample t-Test was employed and also for the hypothesis testing, the Paired t-test was also engaged.

# **Analysis of Research Question One**

What is the difference between the mean performance of students of experimental group and those in the control group in note-taking?

Table 4.2: t-Test of Research Question One

# **One-Sample Statistics of Pre-test Scores**

	N	Mean	Std. Deviation	Std. Error Mean
RAW SCORES OF PRE-TEST EXPERIMENTAL GROUP	83	44.65	7.41	.81
CONTROL GROUP OF PRE-TEST	88	42.95	7.53	.80

From Table above, the researcher observed that a slight difference exists between the pre-test experimental group and that of the control group. This slight difference is noticed from their corresponding mean values (a mean difference of 1.6961 of which the experimental group has a mean value of 44.65 and the control group with a mean value of 42.95). This shows that before the commencement of the note-taking tutorials, the experimental group had an average performance of 45 per cent approximately from the expected outcome or performance. Within the control group, the study also reveals that with a mean value of 42.95, the students within the group performed averagely within 43 per cent of the expected outcome. This shows that the experimental group outperformed the control group by an average difference of 1.69.

Also, with the Standard Deviation of 7.41 for the experimental group and 7.53 for the control group, the table reveals that the students within the experimental group before the commencement of the note-taking tutorials were more consistent than their counterparts within the control group.

## **Analysis of Research Question Two**

What difference exists in the mean performance of male and female students in note-taking? Table below t-Test of Research Question Two

#### **One-Sample Statistics**

		Std.	Std. Error
 N	Mean	Deviation	Mean

PRE-TEST EXPERIMENTAL GROUP FOR FEMALE STUDENTS	49	69.96	9.41	1.34
PRE-TEST EXPERIMENTAL GROUP FOR MALE STUDENTS	34	70.00	8.16	1.40

From Table above, the researcher observed that a very slight difference exists between the pretest experimental group for female students and that of their male counterparts in note-taking. This slight difference is noticed from their corresponding mean values (a mean difference of 0.041 of which the experimental group for female students has a mean value of 69.96 and the male counterparts with a mean value of 70). This shows that before the commencement of the note-taking tutorials, the experimental group for male students outperformed their female counterparts by an average difference of 0.04.

Also, with the Standard Deviation of 8.16 for the pre-test experimental group for male students and 9.41 for their female counterparts, the table reveals that the male students within the defined experimental group before the commencement of the note-taking tutorials were more consistent in performance than their female counterparts.

# **Test of Hypotheses**

That is to say,

If Pr  $(t-test) \le 0.05$ ,

Accept H<sub>1</sub> thereby Rejecting H<sub>0</sub>

But if Pr (t-test) > 0.05,

Accept H<sub>0</sub> thereby Rejecting H<sub>1</sub>.

# **Hypothesis One**

 $\mathbf{H}_{01}$ : There is no significant difference between the students taught note-taking and those not taught note-taking.

 $\mathbf{H}_{11}$ : There is a significant difference between the students taught note-taking and those not taught note-taking.

# **Table of Paired Samples Test Differences**

	Mean	Std. Deviation	t	Df	Sig. (2-tailed)
RAW SCORES OF POST TEST EXPERIMENTAL GROUP - RAW SCORES FOR CONTROL GROUP	2.86	10.397	25.07	82	.00

Table above shows the t-test analysis of the difference between the students taught using note-taking and those taught without note-taking. It is observed that with a t-probability value of 0.00 which is less than the 5% level of significance, we accept the alternative hypothesis that the analysis is significant statistically.

With this, the researcher concludes that there is a significant difference between the students taught note-taking and those not taught note-taking at p<=t-probability value of 0.00

# Hypothesis Two

 $\mathbf{H}_{02}$ : There is no significant difference between the mean scores of the male and female students of the experimental group.

 $\mathbf{H}_{12}$ : There is a significant difference between the mean scores of the male and female students of the experimental group.

<b>Paired</b>	Sampl	les	Test
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	Paired Differ	rences	T	Df	Sig. (2-tailed)
	Mean De	Std. eviation			
POST TEST EXPERIMENTAL GROUP FOR FEMALE STUDENTS - POST TEST EXPERIMENTAL GROUP FOR MALE STUDENTS	.147	12.46	.07	33	.95

Table above shows the t-test analysis of the difference between the story re-telling mean scores of male and female students of the experimental group. It is observed that with a t-probability value of 0.95 which is greater than the 5% level of significance, we accept the null hypothesis that the analysis is not significant statistically. With this, the researcher concludes that there is no significant difference between the mean scores of the male and female students of the experimental group at p<=0.95

#### **DISCUSSION AND CONCLUSION**

Due to the significance of note-taking in learning, teaching and researching, note-taking has both theoretically and practically generated debates since C.C. Crawford began his studies in 1920s to test whether note-taking resulted in improved student performance as cited in Alipour, Idris, & Karimi (2011).

The result of the first research hypothesis revealed that there was a significant difference between the students taught with note-taking and those not taught note-taking. This finding is consistent with evidence of Kiewra (2009) which noted that note taking is beneficial for at least two reasons. First, note taking aids lecture learning by activating attentional mechanisms and engaging the learner's cognitive processes of coding, integrating, synthesizing, and transforming aurally received input into a personally meaningful form. Second, note taking is seen as beneficial because the notes taken serve as an external repository of information that permits later revision and review to stimulate recall of the information heard.

Students who use proper reading skills containing note taking and studying that notes, can preserve knowledge for longer time (Eliot, 2002). Certainly and in consonant with the present finding, it can be ascertained that note taking determines to great extent students' academic performance. In line with this, Michaels and Miethe (1989) found a significant difference between students taught with note-taking and those not taught with note-taking. Their findings /show that students taught with note-taking perform better and are more consistent in academic writing. This proves taking notes as important for learners to record and analyse information acquired through reading. Booner and Holliday (2006) in their study posited that note-taking lets learners either memorizes messages simultaneously in the comprehension process or store them externally after audio input ends. He argued that note-taking breaks messages into comprehensible and memorisable chunks in a timely fashion, such that information can be effectively received and remembered in an effect resembling a flash-back. Storing the message externally reduces the comprehension burden and builds a reader's ability to retrieve information when memory fades after some period of time. In conclusion, the authors posited that note-taking preserves details to develop a better instant memory, which in turn produces more organized and detailed performance.

The result of the second hypothesis revealed that there was no significant difference between the mean scores of the male and female students of the experimental group. The magnitude of the prediction of the two experimental groups was reflected in the value of t-test significance of 0.95 at a Degree of Freedom of 33. The result thus demonstrated that approximately 95% of the variance in the experimental groups does not differ from each other. That is to say, students' academic performance of the two considered experimental groups (that is, performance of the male and female students) is not accounted for by their gender combination. The result was further strengthened by the value of the standard Deviation of 12.46 from the mean value of 0.14. The higher deviation value shows lack of consistency in the difference between the two experimental groups (male and female groups). What the result is saying is that the capacity of the two experimental groups or variables to predict students' academic performance may not have happened significantly individually. This finding is in consonance with the work of many researchers such as Oguz (2009), Chaudron, Cook and Loschky (2008) and Bilbow (2009). Oguz (2009) found an insignificant difference between the male and female students who received note-taking training, taking notes at lessons and reviewing the notes, Chaudron, Cook and Loschky (2004) posited that there was no significant difference in the gender of students taught with note-taking while Bilbow (2009) was of the view that the outcome of note-taking has nothing to do with the gender involved.

#### Conclusion

The method of not taking note at classes has been characterized as ineffective because it relies on transmitting information to students rather than actively involving them in their learning or in exploration of content. Note taking as a decidedly active and multifaceted skill requires academic listening to attend to a speaker purposefully, working memory to hold and organize information

taken in visually or orally and the ability to record pertinent ideas quickly. Information in a subject may be communicated through an oral class, on electronic slides, or through digital and print media. Even in flipped classes (i.e., those in which students prepare themselves through electronically delivered lectures or readings so that their actual class time is spent on activities) students are held accountable for the content such as through the use of quizzes.

Recent classes require students to process information delivered orally, in print, and electronically so that they can use that information to support their learning. In fact, the act of writing down information, or encoding it in print, is believed to benefit recall (Kobayashi, 2005) as well as provide an external memory store for later rehearsal (Eskritt, Lee and Donald, 2001). Those not taking notes have been found to have difficulties understanding and recalling information as well as lower test performance (Armbruster et al, 2009). Yet, many secondary students acknowledge having difficulty with the task (Rachal, Daigle, and Rachal, 2007). Previous research has found that they record less than half of the important information (Baker & Lombardi, 1985). This may be attributable to difficulties with recording information quickly or efficiently such as by paraphrasing and using abbreviations. Examinations of notes that are associated with better content learning suggest higher quality notes are not only more complete, but also well-organized with amacro-structure and clear relationships between main ideas and supporting details. Students with poorer quality notes can have difficulty understanding what they managed to record when they return to their notes later. Unfortunately, few who struggle are directly taught strategies for taking notes successfully.

Having investigated the effects of note-taking on the performance of Junior Secondary Two students in Literature in English in Bwari Area Council of Abuja, this study concludes that there is a significant difference between the students taught note-taking and those not taught note-taking. It also reveals that there is no significant difference between the mean scores of the male and female students of the experimental group.

## **Encouragement to Students**

In order to encourage the performance of Junior Secondary students in classes, the following practical recommendations or suggestions on note-taking were put in place:

- 1. The instructors are recommended to teach different note-taking strategies to their students explicitly.
- 2. Teachers and students should be cognizant to take notes when they find a new piece of information, because the act of note-taking focuses attention encourages the association of ideas and involves a deeper level of processing than listening alone.
- 3. Note-taking should be included in the syllabus of different educational programmes.
- 4. Note-taking practice should be analyzed to teach students how to get the best result from their efforts.
- 5. Notes should be revised, rearranged, rewritten and reviewed.
- 6. Students should try to make themselves acquainted with the function content keywords (which are directly related to the subject matter), directional keywords (which are related to specific things students are expected to do; they are often action verbs) and clue keywords (which indicate that important information is forthcoming.
- 7. Students are advised to compare their notes with those of their peers.
- 8. What the instructor writes on board is usually a cue and students should write it down too.
- 9. It is better to write down notes to be read easier than ideas be cemented in the mind

# Limitations of the study

Despite the wealth of literature on note taking, a relatively small number of studies devoted to Junior Secondary students were located.

Additional research should increase confidence in the findings, so as to improve study rigor by monitoring implementation fidelity, blinding outcome raters to condition, and reporting interrater reliability.

# **Recommendation for further studies**

Having investigated the effects of note-taking on the performance of Junior Secondary Two students in Literature in English in Bwari Area Council of Abuja, further studies should engage the performance of students in Physics, Chemistry and Mathematics.

#### **Conflict of interests**

The authors declare that they have no financial or personal relationship(s) that may have inappropriately affected their report of the findings of this research.



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