

# **EFFECTS OF TEST FEEDBACK ON STUDENTS' INTEREST AND ACHIEVEMENT IN SHORTHAND ASPECT OF BUSINESS STUDIES IN JOS METROPOLIS, NIGERIA**

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## **ABSTRACT**

The purpose of the study was to investigate the effects of test feedback on students' interest and achievement in shorthand aspect of Business studies in Jos metropolis, Nigeria. The study was guided by four research questions and four hypotheses. Quasi-experimental research design was used for the study. The population of the study consisted of all JSS II students in Jos metropolis and the sample consisted of one hundred and three (103) JSS II students in two intact classes of public secondary schools selected through simple random sampling from Jos metropolis. Two research instruments titled Students interest towards shorthand rating scale (SISHR) and Shorthand Achievement Test (SHAT) were constructed and used as instruments for data collection, the two instruments were validated by two experts one from research measurement and evaluation and two from business education department of the faculty of education university of jos. The reliability of the instruments was established and were found to be 0.83 and 0.76. The data obtained were analyzed using the descriptive and inferential statistic; specifically, mean and standard deviation was used to answer the research questions, while the hypotheses were tested using the t-test for independent sample. The result obtained from the study indicated that students exposed to test feedback in Shorthand aspect of Business studies in Jos metropolis performed significantly better than the control group who were taught using the conventional method; also male students had better achievement than their female counterparts. Based on the findings, it was recommended that test feedback strategy should be employed by business studies teachers in teaching shorthand aspect of Business studies.

Keywords: Test feedback, interest, achievement, shorthand, gender, school type, and metropolis.

## **INTRODUCTION**

Business studies is a subject that prepares students for the challenges of the 21st century by introducing them to the world of business. Umezulike and Okoye (2013) see business studies as the key agent of economic and technological development, either as a way of developing human capacity, increasing the workforce for modernization, industrialization, and environmental development, or as a matter of personal freedom. Business studies play a significant role in the economic development of a nation by providing knowledge and skills to the learners, thereby enabling them to adequately impart knowledge to others and handle sophisticated office technologies and information systems. Business studies encompass five different areas which include Book Keeping/Accounting, Commerce, Office Practice, Shorthand, and Typewriting. The practical nature of Business studies makes it interesting because students relate it to real life. They also find it easy to attempt test questions and perform well, especially in the office practice, commerce, bookkeeping, and typewriting aspects of business studies. But the shorthand aspect of Business Studies is an area of difficulty for both teachers and students because teachers avoid teaching it and students avoid studying it; therefore, students' achievement in shorthand is low (Jos North ERC, 2023). Statistics from Jos North Education Resource Center showed that students' achievement in the shorthand aspect of business studies has been low. For example in BECE 2021, only 12% of the candidates attempted shorthand questions; in 2022, 16% of the candidates attempted shorthand questions; and in 2023, only 8% of the candidates attempted shorthand questions, this indicates a negative attitude towards shorthand. The factors responsible for the poor interest of students in shorthand are; anxiety, fear, gender, school type, level of test feedback, and level of motivation of students and teachers. Gender can influence academic achievement due to various factors, including societal expectations, educational systems, and individual differences. Stereotypes and bias may impact students' self-perception and teachers' expectations, potentially affecting academic achievement. Additionally, societal norms may guide

career choices, influencing the pursuit of certain academic subjects. It is essential to consider these complexities and work towards creating an inclusive and supportive learning environment for all genders. The effect of this is low academic achievement in Business studies which can discourage students from opting for business-related careers like accountancy, banking and finance, marketing, business administration, insurance, economics among others. Interest is viewed as attraction which forces or compel one to respond to a particular stimuli. It could also be considered as the feeling of an individual towards a particular object or an activity. Students' interest towards shorthand aspect of business study has the potentials to affect their achievement in the subject. Kudari (2016) reported that students' interest is one of the key factor that affect students' achievement in mathematics. This therefore call for need for teachers to help students to develop positive interest in students offering short hand so as to improve students' interest in the subject. This can be enhance through test feedback

Test feedback is the process of informing students, parents, and administrators regarding a student's progress within the shortest possible time. Test feedback provide information and there is greater learning when there is interaction between teachers and students, feedback helps students because while assessing, the teacher explains the areas where students had difficulties. The importance of employing test feedback by the teacher for the achievement of instructional objectives is immense. Test feedback can be used to influence students' interest in shorthand; the effect of feedback on students' academic performance was investigated by Ajogbeje (2012), who noted that there is a positive effect of feedback on academic performance, and feedback can be positive or negative. Negative feedback can have a negative effect on academic performance, while positive feedback can have a positive effect on achievement.

Studies by Mawak and Ugodulunwa (2012) revealed that students taught using test feedback achieve better than those taught without feedback approach. Another study by Ugodulunwa and Uzoamaka

(2015), noted that test feedback reduces anxiety levels and improves students' performance. In the same vein Umar and Saleh (2016), found that personality traits do not affect students' interest in a subject. Also, Usaini, Delight, and Sylvia (2017) noted that remediation and feedback enhance the achievement of male students. However, much study have not been done on employing test feedback in shorthand aspect of Business studies, creating a gap, hence, this study aims to fill this gap. This therefore calls for the need to conduct a study on effects of test feedback on students' interest and achievement in shorthand aspect of Business studies.

The following objectives guided the study;

1. To determine the effect of test feedback on student's achievement in shorthand between the experimental and control group.
2. To determine the effect of test feedback on students' interest in shorthand between the experimental and control groups.
3. To determine the effect of test feedback on students' achievement in shorthand based on students' gender.
4. To determine the effect of test feedback on students' interest in shorthand based on students' gender.

The following research questions guided the study.

1. What are the pre-test and post-test achievement mean scores of JS II students between the experimental and control group in Jos metropolis?
2. What are the pre-test and post-test interest mean scores of JS II students between the experimental and control group in Jos metropolis?
3. What is the post-test achievement mean score of JS II students in shorthand aspect of Business Studies based on gender?

4. What is the post-test interest mean score of JS II students in shorthand aspect of Business Studies based on gender?

The following null hypotheses were formulated and tested at 0.05 alpha level.

**Ho1:** There is no significant difference in the post test achievement mean scores of students in shorthand between the experimental and control groups.

**Ho2:** There is no significant difference in the post test interest mean scores of students in shorthand between the experimental and control groups.

**Ho3:** There is no significant difference in the post-test achievement mean scores between male and female students in shorthand aspect of Business studies in Jos metropolis.

**Ho4:** There is no significant difference in the post-test interest mean scores between male and female students in shorthand aspect of Business studies in Jos metropolis.

## **METHODOLOGY**

The study adopted a quasi-experimental research design; specifically the pre-test post-test research design. Quasi experimental research design involves the manipulation of an independent variable without the random assignment of participants to groups (Creswell, 2012). The non-equivalent group pretest-posttest design was used; intact classes were assigned to the experimental and control groups, respectively, and no randomization was applied in selecting the samples for the experimental and control groups. The population of the study consisted of all JSS II students in public secondary schools in Jos North Local Government Area of Plateau State, Nigeria. The data for 2023 showed that the number of registered schools in the Jos North Local Government Area was two hundred and nineteen (219), out of which twenty-two (22) are public secondary schools with six thousand, eight hundred and nineteen male and five thousand, five hundred and seventy-nine female students. The population of registered JSS 2 students was twelve thousand, three hundred and ninety-eight (12,398). The sample for this study consisted of one hundred and three (103) JSS II students

comprising of sixty males and forty three female students that were drawn from two public secondary schools in the study area.

Cluster sampling and simple random sampling were used for the research. Cluster sampling is a means of obtaining a sample from a population by taking simple random samples of the clusters, with an observation obtained from each of the sampled clusters (Awotunde & Ugodulunwa, 2014). Simple random sampling was used to select two public schools; two intact JSS II classes were drawn for the study. One control group and one experimental group from the two schools selected for the study was used as intact classes; all the students in the classes drawn constituted the sample for the study. One JSS II teacher with B.Ed. qualification teaching Business Studies was selected based on simple random sampling from the selected schools to assist the researcher in the study.

Students' interest in the shorthand rating scale SISHR and shorthand achievement test SHAT were developed and used as an instrument for data collection. The validity of the SISHR was established through content and construct validity. To establish the validity of SISHR, it was subjected to expert judgment from experts in Research Measurement and Evaluation from University of Jos. The validity of SHAT was determined using content and construct validity, it was subjected to expert judgment. Four experts were required to judge the SHAT among which two experts were from Research Measurement and Evaluation and two from Business Education unit all of the University of Jos.

The reliability of the SISHR was established using Cronbach Alpha. The reliability of SHAT was determined through a pilot study, this was to ensure that the instrument measure what it was supposed to measure consistently. The instrument was administered to a group of JSS 2 Business Studies students who were not used in the main study. The data collected was used to compute the reliability of the SISHR. Reliability of 0.75 and above was considered adequate, as suggested by Awotunde and Ugodulunwa (2014). The data of the SHAT was collected using test-retest method where the same test was administered to students within an interval of three weeks during the pilot study and then, the

two sets of results were correlated to obtain the coefficient of stability. The Pearson Product-Moment Correlation coefficient was used for the correlation and a reliability coefficient of 0.83 and 0.76 was estimated. Mean and standard deviation were used to answer the research questions, while the hypotheses formulated in the study were analyzed using the t-test for an independent sample.

## RESULTS

**Research question 1:** What is the pre-test and post-test achievement mean score of students in shorthand between the experimental and control groups in Jos metropolis?

**Table 1:** Results of the pre-test and post-test achievement mean scores of JS II students in shorthand between the experimental and control group.

Group	N	$\bar{X}$	SD	Mean Gain	Xdd
Experimental	Pre-test	55	20.32	10.96	
					36.65
	Post-test	55	56.97	8.76	
					3.04
Control	Pre-test	48	20.02	11.56	
					33.61
	Post-test	48	53.63	7.75	

Table 1: Showed the achievement of students in shorthand, the experimental group had a pre-test mean of 20.32, standard deviation of 10.96 and post-test mean score of 56.97, standard deviation of 8.76, with a mean gain of 36.65. While the control group had a pretest mean score of 20.02, standard deviation of 11.56 with the post test mean scores of 53.68, standard deviation of 7.75 with a mean

gain of 33.61. From the result, the experimental group had a mean difference of 3.04. It was concluded that the students that were exposed to test feedback performed better than students that were not exposed to test feedback.

**Research question 2:** What is the pre-test and post-test interest mean scores of students in shorthand between the experimental and control groups in Jos metropolis?

**Table 2:** Results of the pre-test and post-test interest mean scores of JS II students in shorthand between the experimental and control group.

Group	N	$\bar{X}$	SD	Mean Gain	$\bar{X}_{dd}$
Experimental	Pre-test	55	38.07	3.39	
					3.27
	Post-test	55	41.34	3.13	
					1.13
Control	Pre-test	48	36.76	5.42	
					2.14
	Post-test	48	38.90	2.84	

Table 2 shows the result of students' interest in shorthand, the experimental group had a pretest mean of 38.07, a standard deviation of 3.39, and a posttest mean score of 41.34, a standard deviation of 3.13, with a mean gain of 3.27. While the control group had a pre-test mean score of 36.76, a standard deviation of 5.42, and post-test mean scores of 38.90, a standard deviation of 2.84, and a mean gain

of 2.14. From the result, the mean difference of the experimental group is 1.13. Hence, test feedback improved the interest of students in Shorthand more than conventional method.

**Research question 3:** What is the post-test achievement mean score of JS II students in shorthand aspect of Business Studies based on gender?

**Table 3:** Results of the post-test achievement mean score of JS II students in shorthand aspect of Business Studies based on gender.

Gender	Group	N	$\bar{X}$	SD	$\bar{X}_{dd}$
Male	Post-test	34	59.5	9.66	
					4.9
Female	Post-test	21	54.6	7.28	

Table 3 shows the results of the analyses of the achievement mean scores of male and female students after treatment. Male students had a post-test mean score of 59.50 and a standard deviation of 9.66 while female students had post-test mean scores of 54.60 and a standard deviation of 7.28. The mean difference between the post-mean scores of males and females is 4.9 in favour of males. From the result, it can be concluded that male students achieved higher than female students in shorthand. Hence, test feedback improved the achievement of male students more than female students in shorthand.

**Research question 4:** What is the post-test interest mean score of JS II students in shorthand aspect of Business Studies based on gender?

**Table 4:** Results of the post-test interest mean score of JS II students in shorthand aspect of Business Studies based on gender.

Gender	Group	N	X	SD	$\bar{X}_{dd}$
Male	Post-test	34	38.74	3.29	
					0.92
Female	Post-test	21	39.66	2.88	

Table 4 reveal the interest mean scores of male and female students after exposure to treatment. The post-test mean scores of male students is  $\bar{X}$ 38.74 and standard deviation of 3.29. While the female students had a post-test mean scores of  $\bar{X}$ 39.66 and standard deviation of 2.88. The mean difference between the post mean score of male and female is 0.92 in favour of females. From the results, the mean difference of females is higher than that of males, thus it can be concluded that females developed interest towards shorthand aspect of Business \studies more than males.

**Hypothesis 1:** There is no significant difference in the post test achievement mean scores of students in shorthand between the experimental and control groups.

**Table 5:** Results of the t-test analysis in students' achievement in shorthand between the experimental and control groups.

Group	N	$\bar{X}$	SD	df	t-cal	P-value	Sig. Level	Decision
Experimental	55	56.97	8.79					
				162	6.29	0.00	0.05	Significant
Control	48	48.90	7.00					

Table 5 showed that the  $t(162) = 6.29$ ,  $P < 0.05$ , since the P-Value of 0.00 is less than 0.05 level of significance, hence it can be said that there is a significant difference in the achievement mean scores of students in Shorthand aspect of Business studies between the experimental and control groups after the two groups were exposed to different treatments. Hence test feedback improved the achievement of students in shorthand more than conventional method.

**Hypothesis 2:** There is no significant difference in the post test interest mean scores of students in shorthand between the experimental and control groups.

**Table 6:** Results of the t-test analysis in students' interest in shorthand between the experimental and control groups.

Group	N	$\bar{X}$	SD	df	t-cal	P-value	Sig. Level	Decision
Experimental	55	39.50	3.27	75	-4.58	0.000	0.05	Significant
Control	48	36.97	4.36					

Table 6 revealed that the  $t(75) = -4.58$ ,  $P < 0.05$ , since the P-Value of 0.000 is greater than 0.05 level of significance, This implies that the alternative hypothesis was rejected, meaning there is no significant difference in the interest mean scores of students in shorthand between the experimental and control groups after the two groups were exposed to treatment. This implies that, test feedback improved the interest of students towards shorthand aspect of Business studies more than conventional methods.

**Hypothesis 3:** There is no significant difference in the post-test achievement mean scores between male and female students in shorthand in Jos metropolis.

**Table 7:** Results of the t-test analysis on students' achievement towards shorthand based on gender.

Group	N	$\bar{X}$	SD	df	t-cal	P-value	Sig. Level	Decision
Male	34	38.72	3.29	74	-1.318	0.196	0.05	Not Significant
Female	21	39.46	2.83					

Table 7 showed that the  $t(74) = -1.318$ ,  $P > 0.05$ , since the P-Value of 0.196 is greater than 0.05 level of significance, the null hypothesis is retained. Hence there is no significant difference in the interest mean scores between male and female students in shorthand aspect of Business studies after exposure to treatment. This implies that students' gender does not affect interest towards shorthand aspect of Business studies.

**Hypothesis 4:** There is no significant difference in the post-test interest mean scores between male and female students in shorthand in Jos metropolis.

**Table 8:** Results of the t-test analysis on students' interest towards shorthand based on gender.

Group	N	<u>X</u>	SD	df	t-cal	P-value	Sig. Level	Decision
Male	34	59.51	9.66	74	-2.31	0.026	0.05	Significant
Female	21	54.86	7.31					

Table 8 showed that  $t(74) = -2.31$ ,  $P > 0.05$ , since the P-value of 0.026 is greater than the 0.05 level of significance. This shows that the alternative hypothesis was accepted. Hence, there is a significant difference in the achievement mean scores between male and female students after exposure to test feedback in favor of male students. This implies that test feedback improved the achievement of male student more than female students after exposure to treatment.

## **DISCUSSION OF FINDINGS**

The finding on the achievement of students in shorthand revealed that the experimental group achieved higher than the control group after exposure to different treatments. This finding is in tandem with the findings of Mawak and Ugodulunwa (2012), who found that students taught using test feedback achieved better than those taught without feedback approach. The hypothesis points that significant difference exists in the post test achievement mean scores of students in shorthand between the experimental and control groups. The implication of this is that test feedback improves students' achievement; therefore, teachers need to adopt test feedback mechanisms in teaching shorthand.

Furthermore, the study also revealed that the experimental group had more interest in shorthand than the control group after exposure to different treatments. This is in agreement with Ugodulunwa and Uzoamaka (2015), who noted that feedback reduces anxiety levels and improves students' performance. The hypothesis points that significant difference exists in the post test interest mean scores of students in shorthand between the experimental and control groups. The implication is that teachers need to employ a test-feedback approach so as to motivate students towards shorthand.

Findings on students' interest based on gender revealed that both male and female students' interest improved after exposure to treatment. This is in agreement with Umar and Saleh (2016), who found that personality traits do not affect students' interest in a subject. The implication is that both genders should be given equal opportunity to develop an interest in their studies. However, findings on students' achievement based on gender revealed that male students achieved higher than females after exposure to feedback treatment. The hypothesis points out that significant difference exists in the achievement of students in shorthand based on gender. This confirmed the view of Usaini, Delight, and Sylvia (2017), who noted that remediation and feedback enhance the achievement of male

students. The implication of this finding is that both genders should be given equal opportunities to do their best.

## **CONCLUSIONS**

From the results of this research, the following conclusions are drawn:

Test feedback has been identified as a better strategy for the teaching and learning of shorthand. This is because test feedback influences the attention of students, thereby making them achieve better than their counterparts in the control group.

It was established that there are no differences in interest mean scores between male and female students when they are exposed to test feedback. This indicated that gender of students is not a barrier to interest in shorthand when feedback as a motivational strategy is provided. However, male students achieved more than their female counterparts, which indicates that gender can influence achievement in shorthand.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations are made:

- i. Test feedback strategy improves students' interest and achievement in the shorthand aspect of Business studies, teachers should incorporate this approach into their instructional delivery. Moreover, school administration, government, and corporate bodies should support the use of test feedback in the teaching of shorthand due to its potential for facilitating learning.
- ii. Test feedback strategy should be used to arouse, sustain, and maintain the interest of students and teachers with a view to annihilating the phobia that students have for shorthand.
- iii. Teachers should be enlightened through workshops, retreats, and seminars to acquaint them with the techniques of test feedback.

- iv. Teachers should up-date their teaching methodologies through the use of test feedback as this will go a long way to improving Shorthand education in Nigeria.
- v. Parents and guardians should always seek to learn from their wards about the daily work done in schools so as to improve their performance. Curriculum planners should plan the shorthand curriculum in such a way that extra time is given for shorthand lessons, so that there will be enough time to make use of test feedback in the class.
- vi. Students with negative attitudes should be encouraged through test feedback, as this will improve their interest in a subject.
- vii. Competent teachers should be adequately recruited, remunerated, and motivated so as to employ a comprehensive teaching methodology imputed with concrete experiences in order to obviate cognitive dissonance and frustration associated with learning failures.

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