

DETERMINANTS OF ATTITUDE OF OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS TOWARDS SHORTHAND IN PUBLIC POLYTECHNICS IN NORTHERN NIGERIA

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ABSTRACT

This study was on determinants of Attitude of Office Technology and Management students towards Shorthand in Public Polytechnics in Northern Nigeria. Specifically, the study had five, objectives, five research questions and five null hypotheses. Descriptive survey research design was adopted for the study. The population for the study was 861 National Diploma II OTM students. The entire population was used for the study. The instrument for data collection was 4-point scale structured questionnaire. The instrument was validated by four experts and pilot tested at Auchi Polytechnic, Auchi, Edo State using 40 students. The data collected from the pilot study was subjected to Cronbach's alpha reliability test and .846 reliability coefficient was obtained. The researchers assisted by five research assistants collected the data using direct approach. The data collected were entered into Statistical Package of Social Science (SPSS) version 25 for data analysis. Mean scores, standard deviations and graphs were used to answer the research questions. Simple Linear Regression was employed to test the research hypotheses at the significant level of 0.05. The results disclosed that stress, anxiety, attitude, self-efficacy and pedagogical approach among others have significant influence on attitude of OTM students in Shorthand. It was concluded that student with high level of anxiety, low level of self-efficacy and low level

of self-esteem among others would develop negative attitude towards Shorthand. The study recommended among others that Shorthand teachers should help their students to developed positive attitude towards the subject by encouraging sharing of ideas among students, engaging constant drilling and motivating students by educating them the importance of shorthand in the labour market.

Keywords: Determinants, Attitude, OTM Students, Shorthand, Public Polytechnics, Northern Nigeria.

Introduction

Education remains the most viable tool for the transformation of human behaviors and development of the society. It is also the totality of life experience that human acquires and which enables them to cope with and derive satisfaction for living in the world. Adamu and Kabir (2019) defined education as the process of guiding and initiating the people to acquire the necessary skills, facts, knowledge, habits and attitude that would make them co-exist with others as useful and productive members of their society. Education in Nigeria is categories into primary schools, secondary schools and tertiary institutions. Polytechnic is one of the higher education levels in Nigeria, responsible for running Office Technology and Management programme to provide students with knowledge and competencies needed for clerical and managerial office task. (Amoor & Adamu, 2016).

Office Technology and Management (OTM) programme in Nigeria according to Fadara (2020) was design to replace the Secretarial Studies programme. The curriculum of OTM was designed to equip its graduates to acquire vocational skills in OTM and socio-psychological work skills with adequate knowledge for management of modern office technology and information systems so that they would be very relevant in ultra-modern office and be able to effectively compete in the labour market after graduation. The curriculum of OTM is enriched and expanded with core courses in order to ensure quality performance among graduates (Amoor & Adamu, 2013). One of the core courses of OTM students in Shorthand. According to Ram (2016), Shorthand is an abbreviated symbolic writing method that increases speed and brevity of writing as compared to a more common method of writing a language. The course is designed to provide pre-service office managers with skills and competencies that will enable them keep pace with the speakers of the readers and record accurately words spoken or read. This explained why Amoor and Adamu (2016) opined that competency of a secretary depends of their ability to take shorthand notes as dictated by the executive and transcribed same accurately on the typewriter. Similarly, Sulaiman (2017) maintained that Shorthand allows accurate taking of notes efficiently and effectively.

Despite the importance of Shorthand, studies have shown that the attitude of OTM students towards the course in Northern Nigeria is not encouraging (Abdulrazak, Adamu & Haruna, 2020). According to the authors, the attitude of a learner towards Shorthand has made most OTM students to fail the course. Similarly, Ram (2016) reported that the attitude of students towards Shorthand in Nigeria has been dissatisfied. Awak (2015), Okoro (2018) and Baba (2018) opined that the attitude and performance of students in Shorthand in Nigeria is persistently very low and worrisome. Empirical evidence from Amoor and Zakari (2015) reported that generally the attitude of students towards shorthand affects their graduation

because of persistent failure in course. Additionally, Baba (2018) reported that Shorthand is one of the major problems of OTM students and their negative attitude towards the course need to be investigated.

Many factors responsible for attitude of students in learning have been documented by scholars. For instance, Oduwaiye, Yahaya, Amadi and Tiamiyu (2017) documented that attitude towards learning tend to have decreased as a results of interest, stress, anxiety and self-efficacy. Also, Kaumi and Ali (2018) reported that attitude of students can be hampered by level of stress and motivation. According to Abu Saa et al. (2019); Ahinful et al. (2019); Basith et al. (2020); Basith et al. (2020); Jayaluxmi and Rajendran (2021) self-efficacy beliefs, perceived difficulties have negative effect on attitude of students. Accordingly, Lai and Aksornjarung (2018) recommended that teachers should adopt motivational strategies that would enable students have positive attitude towards learning. This explained why Dauda (2021) argued that the influence on non-cognitive factors on attitude of students should be investigated periodically. According to Ardura and Galán (2019), research works on the effect of non-cognitive variables on students were scarce. Specifically, there is literature gap on the role of non-cognitive variables on attitude of students towards Shorthand which the present study filled the research gap.

Objectives of the Study

The study specifically set out to determine the influence of:

1. academic stress on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
2. anxiety on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
3. interest on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
4. self-efficacy on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
5. outline/stroke cognitive difficulties on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria

Research Questions

In line with each specific objective, the following research questions were raised:

1. What is the influence of academic stress on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria?
2. What is the influence of anxiety on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria?
3. What is the influence of interest on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria?
4. What is the influence of self-efficacy on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria?
5. What is the influence of outline/stroke cognitive difficulties on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria?

Research Hypotheses

The following five null hypotheses were formulated in line with the research questions to guide this study:

- H0₁:** Academic stress has no significant influence on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
- H0₂:** Anxiety has no significant influence on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
- H0₃:** Interest has no significant influence on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
- H0₄:** Self-efficacy has no significant influence on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria
- H0₅:** Outline/stroke cognitive difficulties have no significant influence on the attitude of Office Technology and Management Students towards Shorthand Polytechnics in Northern Nigeria

Research Design

The study adopted survey research design. Osakpa, Okonkwo, and Ejiogu, (2018) defined descriptive survey design as one in which a group of individuals or items are studied by collecting and analyzing data from representative of the entire population of or items in which the result of the study is generalized. The design was considered appropriate for the study since the study uses questionnaire to elicit data from sample of the larger population for the study.

Population and Sample for the Study

The population was 861 Office Technology and Management National Diploma II (ND II) students that offered Shorthand in 2020/2021 in 20 public Polytechnics in the Northern Nigeria. The study employed Total Population Sample (TPS) in which the 861 students were used for the data collection. The decision was based on the submission of Auka, Bosire and Matern (2013) suggested that if the population is not large, TPS should be adopted.

Instrument for Data Collection

A structured 4-point scale structured questionnaire titled Attitude Determinants Towards Shorthand Questionnaire (ADTSQ) was used for data collection. The instrument was adapted from previous studies as suggested by Adamu and Kabir (2019) who opined that, measurement instrument can be adopted or adapted when the present and previous study(s) are related or closely related. The questionnaire items were drawn from previous work Pizzie and Kraemer (2019) on titled Academic Anxiety Inventory: Evidence for dissociable patterns of anxiety related to math and other sources of academic stress; Martin and Gerald (1970) on research work titled the measurement of academic interest; Schwarzer and Jerusalem (1995) on work titled *General Self-Efficacy Scale (GSE)*.

Motivation students - Arslaan, Ayesha, Zara, Quratulain, Khawaja and Sanniya (2019) in their work titled "assessment of academic motivation level of undergraduate medical students of Azad Kashmir, Pakistan" was used to collect data on Motivation of Students in Shorthand MSS). The instrument developed by National Research Council (2003) on attitude towards mathematic titled Attitude Inventory Questionnaire (AIQ) was used to collect data on attitude

of OTM students towards Shorthand. Each construct has 15 questionnaire items measured in 4-points interval scale of Strongly Agree (SA), 4-Points; Agree (A), 3-Points; Disagree (D), 2-Points and Strongly Disagree (SD), 1-point.

Validation and Reliability of the Instrument

The instrument was validated by experts in Business Education, Office Technology and Management staff that specialized in Shorthand and educational Psychology from Ahmadu Bello University Zaria, Kaduna state and Nuhu Bamali Polytechnic Zaria, Kaduna state. The experts made input in areas of grammar, spellings and sentences that were integrated into the final copy. A pilot study was conducted at Auchi Polytechnic, Auchi, Edo State with 40 students. The data collected were analyzed using Cronbach's alpha and constructs reliability were all above 0.70. The instrument was found to be reliable as suggested by Madiha and Walid (2016) who opined that acceptable reliability of survey instrument should be at least 0.7.

Method of Data Collection

The researchers assisted by course lecturer in each of the institutions in data collection. Direct method of delivery was used in the data collection. The method was considered appropriated because it enabled the researchers to attend to students that sought for more explanations; it also facilitates the data collection process and in addition, led to retrieval of significant number of properly completed copies of questionnaire. This was earlier reported by Adamu and Kabir (2019) who opined that direct method of data collection enable researchers to thoroughly explain the purpose, importance and confidentiality of all information to the respondents. The respondents were required to indicate their relative opinion with each item based on the scale. In each of the institutions, one day was given to the respondents, to complete the questionnaires. The exercise lasted for six weeks.

Method of Data Analysis

Data collected in the study were entered into Statistical Package for the Social Science (SPSS) version 25. The package was used to run descriptive statistics of cumulative scores, grand scores, mean and standard deviation were used to answer the research questions. According to Abdullah and Ahmad (2013), a descriptive statistical analysis is used to create, present, and summarize information from the data to facilitate the readers' understanding. The decision rule was based on lower and upper class limits.

The null hypotheses were tested using simple linear regression at the significant level of 0.05. The choice of the statistical tool was based on the decision of Pallant (2011) who opined that simple linear regression is the appropriate tool to measure the influence of one independent variable on one continuous dependent variable. In the analysis, when the p-value was less or equal to the alpha value ($p \leq 0.05$), the hypothesis was rejected and when the p-value was greater than the alpha value ($p > 0.05$), the hypothesis was retained.

Results of the study

The results of the study were presented in Tables 1 to 6

Null hypothesis one

Academic stress has no significant influence on attitude of Office Technology and Management Students towards Shorthand in Polytechnics in Northern Nigeria

Table 1: Regression Analysis on influence of academic stress on attitude of OTM students towards Shorthand in Polytechnics in Northern Nigeria

Standardized Coefficients (Beta)	T	R	R ²	Adj. R ²	Sig.	Decision
.541	18.016	.541	.293	.292	.000	Rejected

a. Dependent Variable: Attitude

b. Predictors: (Constant), Stress

c. Source: Fieldwork, 2021

The result of regression analysis documented in Table 1 reveals that stress had a standardized coefficients beta value of .541 and the t-value stood at 18.016 with R-square value of .293 which represents 29.3% influence. The $p = .000$ was less than 0.05 level of significance, this suggested that influence of the stress on attitude of OTM students towards Shorthand was significant. The hypothesis was therefore rejected.

Null hypothesis two

Anxiety has no significant influence on attitude of Office Technology and Management Students towards Shorthand in Polytechnics in Northern Nigeria

Table 2 Regression Analysis on influence of anxiety on attitude of OTM students towards Shorthand in Polytechnics in Northern Nigeria

Standardized Coefficients (Beta)	T	R	R ²	Adj. R ²	Sig.	Decision
.668	25.136	.668	.446	.446	.000	Rejected

a. Dependent Variable: attitude

b. Predictors: (Constant), Anxiety

c. Source: Fieldwork, 2021

The statistical evidence in Table 2 reveals the standardized coefficients beta value of .668 with t-value of 25.136. The R-value obtained was .668 and R-Square stood at .446. The result indicated that anxiety had 44.6% influence on attitude of OTM students towards shorthand in Polytechnics in Northern Nigeria. The p-value of .000 further indicated that the influence of anxiety on attitude of OTM students towards Shorthand was significant. The null hypothesis was therefore rejected.

Null hypothesis three

Interest has no significant influence on attitude of Office Technology and Management Students towards Shorthand in Polytechnics in Northern Nigeria

Table 3: Regression Analysis on influence of interest on attitude of OTM students towards Shorthand in Polytechnics in Northern Nigeria

Standardized Coefficients (Beta)	T	R	R ²	Adj. R ²	Sig.	Decision
.539	17.898	.539 ^a	.290	.289	.000	Rejected

- a. Dependent Variable: Attitude
- b. Predictors: (Constant), Anxiety
- c. Source: Fieldwork, 2021

The statistical result in Table 3 disclosed the standardized coefficients beta value of -.539 with t-value of 17.898. The R-value obtained was .539 and R-Square stood at .290, this suggested that anxiety had 29% influence on the interest of OTM students in Shorthand in Northern Nigeria. The p-value of .000 < 0.05 further shows that the anxiety has significant influence on interest of OTM students in Shorthand. The null hypothesis was therefore rejected.

Null hypothesis four

Self-efficacy has no significant influence on attitude of Office Technology and Management Students towards Shorthand in Polytechnics in Northern Nigeria

Table 4: Regression Analysis on influence of Self-Efficacy on attitude of OTM students towards Shorthand in Polytechnics in Northern Nigeria

Standardized Coefficients (Beta)	T	R	R ²	Adj. R ²	Sig.	Remark
.371	11.171	.371 ^a	.137	.136	.000	HO ₄ Rejected

- a. Dependent Variable: Attitude
- b. Predictors: (Constant), Self-efficacy
- c. Source: Fieldwork, 2021

The statistical evidence in Table 4 reveals the standardized coefficients beta value of .371 with t-value of 11.171 which suggested that the Self-efficacy has influence on performance of OTM students in Shorthand in Northern Nigeria. The R-value obtained was .371 with R-Square value of .136 which indicated that Self-efficacy has 13.6% influence on OTM students towards Shorthand. The p-value of .000 which was found to be less than 0.05 level of significant further revealed that the influence of Self-efficacy on attitude of OTM students towards Shorthand was significant. The null hypothesis was therefore rejected.

Null hypothesis five

Outline/stroke cognitive difficulties have no significant influence on attitude of Office Technology and Management Students towards Shorthand in Polytechnics in Northern Nigeria

Table 5: Regression Analysis on influence of cognitive difficulties on attitude of OTM students towards Shorthand in Polytechnics in Northern Nigeria

Standardized Coefficients (Beta)	t	R	R ²	Adj. R ²	Sig.	Decision
.752	31.899	.752 ^a	.565	.564	.000	Rejected

- a. Dependent Variable: Attitude
- b. Predictors: (Constant), cognitive difficulties
- c. Source: Fieldwork, 2021

The statistical result in Table 5 reveals the standardized coefficients beta value of -.752 which indicated that Outline/stroke cognitive difficulties had influence on the attitude of OTM students towards Shorthand. The R-value obtained was .752 with R-Square of .565. The obtained R-Square suggested that the Outline/stroke cognitive difficulties had 56.5% influence on the attitude of OTM students towards Shorthand. The p-value of .000 further shows that the influence of Outline/stroke cognitive difficulties on attitude of OTM students in Shorthand was significant. The null hypothesis was therefore rejected.

Discussion of the Findings

The result of research question one revealed that, academic stress has influence on the attitude of Office Technology and Management students towards Shorthand in in Federal Polytechnics in Northern Nigeria. The test of corresponding null hypothesis indicated that the influence on academic stress on interest of OTM students in shorthand was significant. This is consistent with the finding of Okorie (2016) which reported that excessive stress is harmful to academic performance and may lead to negative attitude. This also lays credence to the finding of the study conducted by Kotter, Wagner, Bruheim, and Voltmer (2017) which reported that, higher perceived academic-related stress was found to predict poor academic performance and attitude towards learning. Academic stress affecting students also leads them to have bad performance in school work due to lack of concentration (Samson-Akpan, John, Edet & Uka, 2017).

The impacts of stress on students brings about poor academic performance, reduced initiative skills in tackling academic problems as well as creating confusion in their minds and negative attitude especially when study schedules in schools appear challenging (Essel & Owusu, 2017). The outcome is also in consonance with the findings of Onukwufor and Izuchi (2017) who reported that there was significant difference between male and female students stress. This also supported the study conducted by Alam and Kumar (2018) which established that there was a relationship between academic stress, attitude and academic performance. Odiemo (2018) who found the relationship between stress level, attitude and academic performance were significant. The findings were strengthened by another study by Umar (2019) which revealed that, stress at long run generate a confused atmosphere of uncertainties for students which at long run make them to easily forget what they have been taught, which leads to poor academic performance in schools. In Kenya research conducted by Mutua (2018) disclosed academic mind-set affects attitude and achievement of students. Alam and Kumar (2018) established that there was a relationship between academic stress and attitude towards learning. Academic stress his harmful on students' attitude towards learning (Zain, 2018).

The outcome of research question two and test of corresponding null hypothesis two indicated that anxiety significantly influence the attitude of OTM students towards shorthand in Polytechnics in Northern Nigeria. The find is on line with that of Wang and Degol (2013) who reported that, motivational and emotional factors anxiety and self-efficacy can be better predictors than either math aptitude or math course enrollment. The outcome also agreed with the stud conducted by Bernal-Morales, Rodríguez-Landa, and Pulido- Criollo (2015) whose study shows that, aside from impairing overall health and well-being, depression and anxiety symptoms can further adversely affect academic achievement and attitude of students. Dekhtyar et al., (2018) also found that the relations between math performance and STEM careers were partially mediated by “math task value,” or the degree to which student’s attitude and were interested in learning math. Consequently, a causal relationship between MA and avoidance of a career with a high math load seems plausible (Ahmed, 2018). Huang, Zhang and Hudson (2019) who opined that elevated anxiety level are related to poor numerical performance and low enrolment in math and science classes. Some students find it challenging to learn arithmetic or mathematics because they suffer from mathematics anxiety, a persistent adverse reaction to mathematics ranging from mild discomfort to extreme avoidance (Ashcraft, 2019). Singh, Chandwani, Singh and Kumar, (2019) also found that computer anxiety was negatively correlated with student’s grade point, attitude in using computer and time spent on computer and internet.

The result of research question four which was further affirmed by test of null hypothesis four suggested that interest is a strong predictor of students’ attitude toward shorthand. The outcome is in consistent with that of Halim and Meerah (2016) who reported that factor contributing to the low enrollment of students in science might be their low self-efficacy, attitude and achievement in science. The study conducted by Sari (2017) also reported that the students’ learning attitude and achievement declines due to low student interest, teachers related factors, learning environment, and teaching approach adopted at school. Aurah (2017) also opined that students’ course selections and interest can be explained by attitude. This also coincides with the report of Heflin, Shewmaker and Nguyen’s (2017) who opined that interest and self-efficacy plays significant role on attitude of students towards m-learning usage. The finding of the study replicated that of Fadare (2020) who opined that, there are many factors that influence the teachers and student’s relationship towards the teaching, interest and understanding of shorthand. The author added that such variables include aptitude, attitude, subject mastery and teaching methodology among others.

The finding of research question four which was further affirmed by the test of corresponding null hypothesis reported that self-efficacy has influence on attitude of OTM Students towards shorthand. The result agreed with that of Wang and Neihart (2015) which shows that academic self-concept and academic self-efficacy could influence attitude and academic achievements of students. A study by Amin et al. (2016) reported that self-efficacy is one of the predictors of attitude and academic achievement in online peer learning amongst undergraduate students in public universities. The study reported that there was a significant relationship between academic self-efficacy, peer involvement, social influence, peer feedback, attitude and cooperation with academic achievement amongst the respondents. Similarly, the study of Kamali- moghaddam et al. (2016) indicated influence of mathematical beliefs and self-efficacy was significant. The findings of the study reported that the students

who had strong beliefs in mathematics had higher self-efficacy. Self-efficacy is one of the affective factors often associated with attitude and academic achievement (Ramnarain & Ramaila, 2017). Equally, the study of Aurah (2017) reported that student low self-efficacy can lead to a low achievement and avoidance of science courses.

The result of research question five and test of hypothesis five revealed that the influence of outline/stroke cognitive difficulties on attitude of OTM students towards shorthand was significant. The outcome was found to be in line with the submission of Ugoji (2011) who opined that the attitude and failure of student in shorthand is attributed to complexity of the subject. Also, Amoor (2014) reported that students dislike Office option as a result of their attitude towards shorthand. The finding also concurred with that of Benjamin and Emmanuel (2017) which shows that student's perception of difficult concepts in Biology has influence on the subject. Usman (2018) also reported that the attitude of students is affected by their misconception of the difficulty of the subjects.

Supporting the finding, the research conducted by Baba, Aburiya and Azeesis, (2018) reported that student's transcription of shorthand is poor and the outlines are also bad as a result of complexity of the subject and their attitude towards the subject. The author attributed students' attitude to Office Option to difficulty of understanding the shorthand outlines, vowels and Stroke in addition, Ehirheme (2019) reported that, lack of positive attitude towards shorthand students find it very difficult. Similarly, the study conducted by Fadare (2020) reported that student's difficulties on mastery of shorthand outlines and vowels principles affect their attitude and interest in choice of the subject as a career. Abdulrazak, Adamu, Yaduma and Yushau (2019) reported that the poor performance of students in shorthand and their low enrolment in Office option is as a result of misconception of the subject has been difficult and not easy to understand. Similarly, Abdulrazak, Adamu, Yaduma and Yushau (2021) reported that inability to master shorthand outlines and vowels is the major hindering business education students to opt for Office option in Nigerian Universities.

Conclusion

The study focused on determinants of Attitude of Office Technology Management students in Shorthand Federal Polytechnics in North-West Nigeria. The study disclosed that stress, anxiety, interest, self-efficacy and cognitive difficulty have influence on attitude of OTM students in shorthand. Consequently, the ultimate philosophy of introducing OTM programme in polytechnics of producing graduates who would be useful to themselves and contribute meaningfully to the socio-economic development of the country through adequate learning and character development has been hampered by their attitude towards shorthand. The study concluded that, if the present situation would affect the realization of the laudable objectives of OTM programme if the situation remained unchanged.

Recommendations

Based on the outcome of the study, it was recommended that:

1. Shorthand lecturers should provide training and orientation programme to their students on how to manage academic stress that hampered the attitude of OTM students in shorthand.

2. The head of OTM in collaboration with guidance and counselling unit should organize training section to shorthand students on how to prepare for examinations, including the development of study skills and memory strategies that would help to address the problem of academic anxiety among students.
3. Institution should initiate intervention programme like guidance and counselling that would help to support students to buffer the negative impact of anxiety and enhance positive coping strategies which enhance students' attitude towards shorthand.
4. Shorthand teachers should help their students to developed interest in the course by encouraging and engaging them constant drilling and motivating the students.
5. Orientation programme, seminars and workshops should be organized by the department of OTM in collaboration with the counselling and human development centers to enlighten their students on the how to develop self-efficacy on shorthand that they would improve their performance and interest in shorthand.

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