

**INFLUENCE OF READING HABITS ON NON-SCIENCE PRE-SERVICE
TEACHERS' INTEREST AND ACADEMIC PERFORMANCES IN GENERAL
SCIENCE EDUCATION IN FEDERAL COLLEGE OF EDUCATION
ABEOKUTA**

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Abstract

This study has the objective of determining the influence of reading habits of students studying arts and social science education at the federal college of education Abeokuta on their interest and academic performance in general science education courses. To that end, data of questionnaires applied to a total of 247 students have been analysed along with their scores in a general science education course at the school, and the results showed a weak statistically significant weak correlation between interest in science materials and reading habit of reading science materials and frequency of reading generally at p-value .0001 and .021 ($p < .05$) respectively while there was no significant correlation between academic performance in general science education courses and all parameter of reading habit. Also, there is no statistically difference in the interest of both male and female respondents interest in general science education reading materials and classes, neither was there a significant difference in the general science readings and interest in general science materials and classes among male and female non-science major pre-service teachers. Majority of the students have not read any type of material in the academic session at hand, thus their academic performance in general science education course did not correlate with their reading habit. It was

recommended that there should be courses that will mandate students in the higher institution especially in the colleges of education to read wide range of materials within and outside their area of specialization to gain knowledge and also improve their reading ability.

Keywords: *Reading, reading habit, general science education*

INTRODUCTION

The activity of reading of an individual, which commences together with the beginning of school age and continues throughout their lifetime is the basic tool of learning. After acquiring basic skills pertaining to reading, ensuring that these skills are permanent, sustained throughout life, and transition to functional and critical literacy is closely related to the reading habit of the individual. In individualistic terms, the habit of reading is also one of the most important foundations of a robust and developed personality. In the world of today where knowledge is increasing rapidly and science and technology impose constant changes to human life, it is observed that humans constantly need to improve themselves in both their professional and social lives (Erdem, 2015). In occupational and career development after formal education, especially for the purpose of being able to adapt to change, education and lifelong learning has become a necessity. When it is considered that a significant proportion of acquired knowledge is acquired through reading, the importance of reading in adapting to this changing age can be better understood.

Reading opined by Ozbayin Erdem (2015) as a multi-stage complex process was define by him as "the process of the brain evaluating and making sense of signs and symbols perceived through the eyes". It is considered a process of perceiving where symbols are recognized. Bambergerin Erdem (2015) described having reading become an habit and sustaining it throughout life as being among the basic objectives of education. A habit is a characteristic behavioural pattern that is learnt and reinforced in a manner realized in every case automatically (Blaha& Bennettin Erdem, 2015).

Habits enter our lives at a slow pace and become established after a certain period. If habits are not quitted, in time they become needs (Aksaçlıoğluin Erdem, 2015). When reading, which is the basic manner of acquiring information is transformed into a habit, another notion called "reading habit" comes into being. The habit of reading is the act of reading being carried out throughout life in a constant, regular and critical manner as a result of it being perceived by the individual as a need and source of pleasure (Y?lmazin Erdem, 2015). The habit of reading is the basis of lifelong learning. For the purpose of the individual being someone that learns throughout his/her life, it is necessary for the act of reading to be conducted regularly throughout life (Odaba?, Odaba?&Polatin Erdem 2015).

Reading habits are well-planned and deliberate pattern of study which are being carried out consistently in learners' desire to acquire understanding, knowledge or pleasures. Reading habits have been shown to influence learners' academic achievements greatly, and both have been found to be inter-dependent and related somehow. Razia(2015) and Palani (2012)opined that good reading habits are important means of achieving effective learning, and that it is interrelated with the holistic educational process. Therefore, educational success requires successful reading habit. The author described reading as the identification of the symbols and the association of appropriate meaning with them.It is the reading habits which help the learner in obtaining meaningful and desirable knowledge. Good reading habits act as a strong weapon for the students to excel in life (Okebukola, 2004). Study Habit is a behavioural style that is systematically formed by students towards learning and achievement. According to Ghulam (2013), study habits are the students' way of study, whether systematic, efficient, or inefficient. It is viewed that good study habits are perceived to be the determinants of academic performance. According to Thomas Wilmer in Ghulam (2013), study behaviour is mental readiness to learn. It is organized through experiences, objects, and situations in the study.

Balan, Katenga&Simon (2019) confirms that in building the habit we need longer time because the interest and motivation have rule in it. There is no interest and motivation, generally, the habit will never exist. Furthermore, Reid (2007) states that habits are our emotional regulators or comforters. Our thinking and behaviour follow the grooves in our minds. In this case the researcher states that reading habit is behaviour to read which is done regularly to understand information and get entertainment from written material. Reading can be obtain from fiction, non-fiction, book, magazine, newspaper, reading also useful for getting knowledge. The quality of the interest in reading and habit of reading of pre-service teachers is of critical significance in terms of them being examples for children and young people. Studies indicate that teachers are the ones who influence children the most in acquiring the habit of reading. Similarly teachers are the ones who give their first books to students Balan, Katenga&Simon (2019). Teachers continue to be models even after they have acquired children with the habit of reading. As it can be observed, as it is in all areas of education, in this area it is also teachers who have the role of being a model, laying foundations, and formalizing the new generation.

General science education is aimed at achieving the goal of science literacy for all in the post-secondary schools and colleges. The importance of this type of courses in our universities and colleges of education especially for those being prepared to become teachers are enormous: the many issues relating to health, environment, human development, productivity and life expectancy are one way or the other related to science. A pre-service teacher with substantial science literacy will be an asset not just in the classroom but also in the community; as he seamlessly impact nature and fundamental of science and scientific thinking to the younger

generation, provide precise information that their pupils could carry into their communities as agent of change especially in our epidemic and pandemic challenged world, and improved directly and indirectly individual and communal activities that destroying individual and community's well being.

Purpose of the Study

The purpose of this study is to determine the influence of the reading habits of pre-service teachers of the school of Arts and Social Sciences at Federal College of Education, Abeokuta on their interest in general science education classes and study materials, and their academic performance in general science education.

Statement of the Problem

There have been several studies on factors amplifying and reducing reading habits, its influences on study skills and academic performance. However, there are paucity of information on the influence of reading habit on students' interest and performances in general science course among non-science majors in the Colleges of Education. Therefore, this present study seeks to understand the part being played by students' reading habit in determining students interest and academic performance in general science literacy courses in the Colleges of Education.

Research Questions

1. Are there differences in the reading habits of male and female students?
2. What is the level of interest of non-science pre-service teachers in general science education materials and class?
3. To what extent do non-science pre-service teachers' reading habit[(a) numbers of readings, (b) frequency of reading), and (c) reading of science materials] predict academic achievement and interest in general science education courses at the College of Education?

Research hypothesis

H₀₁: There's no correlation between non-science pre-service teachers' reading habit and their academic achievement and interest in general education science courses.

H₀₂: There is no significant difference in the reading of science materials and interest in science classes among male and female non-science major pre-service teachers

Method

Model of the study: The survey model has been utilized in the study.

Study Group: The participants were second year students in the national certificate of education program in arts and social sciences combinations at the Federal College of Education, Abeokuta during the 2020-2021 academic calendar. A purposive sampling technique was employed in this School of Arts and Social Science and a total of 247 students from this school participated in the survey.

Data Collection Tool: As a data collection tool in this study, a self-constructed questionnaire with alpha value of 0.78 was used to elicit the necessary information from respondents. There were questions in the questionnaire oriented at determining the personal details, reading habits (number of general readings in the year, the frequency of general readings and frequency of general science education readings), and level of interest in general science education materials and classes of the pre-service teachers. Academic performance is measured with the respondents scores in a general science education course exam written in the second semester of 2019-2020 session.

Collection and analysis of the data: The study was performed in the second semester of the 2020-2021 academic year. The data obtained in the study Data was analysed using descriptive and non-parametric inferential statistics (ANOVA, t-test, ordinal regression and Spearman's correlation) on Statistical Package for Social Sciences (version 25) and have been interpreted after being presented in the form of tables.

Findings and Interpretations

In this section, the personal details of a total of 247 students in the study group from the school of Arts and Social Sciences of the Federal College of Education Abeokuta have been presented and the response of students to the questionnaire have been presented in the form of tables and analysed and interpreted.

- a. **Reading Preference:** The respondents' reading preference were analysed through the numbers of reading materials that have so far been read in 2021 under different categories irrespective of whether they are for academic purpose or leisure.

Table 1: Distribution of respondents Reading Preference and Numbers of General Reading Materials read by Pre-service teachers in 2021

Number Read	0	1-10	11-20	21-30	31-40	41-50
Novels	125 (50.6%)	87(35.5%)	19(7.7%)	10(4%)	3(1.2%)	2(0.8%)
E-books	181 (73.3%)	57(23%)	7(2.8%)	1 (0.4%)	0	1 (0.4%)
textbooks	150(60.7%)	88(29.4%)	6(2.4%)	2(0.8%)	0	1(0.4%)
Lecture notes	146(59.1%)	75(29.22%)	14(5.6%)	9(3.6%)	1(0.4%)	2(.8%)
Newspaper	209(84.6%)	35(14.1%)	2(0.8%)	1(0.4%)	0	0
Magazine	214(86.6%)	31(12.5%)	2(0.8%)	0	0	0

Table 1 shows the number of materials read in the first row divided into six (6) classes from zero number of readings to 50. as it could be seen greatest percentage of the respondents did not read anything in the year under review as 86.6% did not read magazine, 84.6% did not read newspaper, 73.3% did not read e-book, 60.7% did not read textbook, 59.1% did not read their lecture notes and 50.6% did not pick a novel to read. This reflect that reading is not a popular attribute among these students.They did not reflect the possession of a healthy reading habit, this agreed

with the findings of Aina, Ogunbeni, Adigun&Ogundipe(2011). If the numbers that read between 1 to 10 materials are considered, it is glaring that only 35.5% read at least a book per month and surprisingly only 29.22% read at least a lecture note per month. Magazines, newspapers and e-books were the least read material by the respondents . respondents that can be considered as having a kind of reading habit are 13.7% of the population (if reading between 11 to 50 material are considered a good reading habit).

This result shows respondents preference for novels, lecture-notes and textbooks. This result correspond with the findings of Popoola, Amoo, Umar, Popoola&Olatunji, (2020) in a study among secondary schools in Ibadan, but it defers slightly from that of Daniel, Esoname, Chima&Udoaku (2017) that showed that student of AfeBabalola University Ekiti had greater preference for newspaper, magazine, textbooks and e-resources over notebooks. These could be due to the fact that these students are university undergraduates in one of the most expensive private universities in Nigeria; they could afford electronic devices, newspapers, magazines and textbooks are available in their library, and possibly they are required to provide during examinations informations beyond class notes.

b. Research Question 1: Are there significant differences in the reading habits of male and female students?

Table 2: Analysis of Variance for Reading Habit (general reading, frequency of general reading and frequency of science readings) among Male and Female non-science major pre-service Teachers

Reading Habit	Gender	N	Mean	Std. Deviation	F	Sig
General Reading	male	88	1.9867	4.87495	.015	.901
	female	159	1.9193	3.59162		
	Total	247	1.9433	4.08546		
Frequency of Reading	male	88	3.1818	.56710	.031	.861
	female	159	3.1950	.56042		
	Total	247	3.1903	.56169		
Science Reading	male	88	2.8705	.75081	10.903	.001
	female	159	2.5887	.57379		
	Total	247	2.6891	.65506		

Table 2 shows that there exists only a statistically significant difference in the reading of science material aspects of the respondents reading habit. The male respondents have a greater mean in reading of science materials. In the other aspects of reading habit, there exist slight differences in the number of general readings and frequency of reading in both sexes which are found to be not statistically significant.

There exist only a statistically significant difference in the reading of science dimension of the reading of science materials among male and female non-science major pre-service teachers in the federal college of education Abeokuta.

The result of this study contradict that of Loh,Sun& Majid (2020) which suggested that girls enjoy reading more than boys, and the girls equally read more on-line in the area of technology than boys in a study among adolescent in Singapore. This study shows that boys are slightly better in numbers of reading materials read and the frequency of science readings but not in frequency of general readings. Science has been considered a male dominated study and male having greater means than female corroborate this.

c. Research question 2: What is the level of interest of non-science pre-service teachers in general science education materials and class?

Table 3a: Distribution of Interest of non-science pre-service teachers in general science education materials and class?

Statement	Always	sometimes	Once awhile	Never	Not applicable
I have interest in general science materials & classes	74(30.0%)	84(34.0%)	43(17.4%)	40(16.2%)	6(2.4%)

Table 3b: Distribution of Male and Female non-science pre-service Teachers Interest in General Science Education Materials and Class?

	gender	N	Mean	Std. Deviation	Sig
Interest in Science material and Classes	male	88	2.8409	1.16349	.246
	female	159	2.6667	1.10618	

Table 3a shows that the respondents do not have good interest measure in reading science materials and attending general science education classes as only 30% indicated that they always have the interest while 51.4% sometimes and once awhile have interest in those materials and the classes. 16.2% never have interest in both.

Table 3b reveals that there is no statistically difference in the interest of both male and female respondents interest in general science education reading materials and classes. The mean value for both groups are slightly different but not significant.

The level of interest is low and there's no significant difference between the male and female non-science pre-service teachers' interest in science materials and classes. This result agrees with the findings of Popoola et al. (2020).

d. Research question 3: To what extent do non-science pre-service teachers' reading habit[(a) numbers of readings, (b) frequency of general readings, and (c) frequency of general science readings] predict academic achievement and interest in general science education courses at the college of education?

Table 4: Ordinal Regression for Prediction of Interest in general science materials and classes, and Academic Performance in general science education course by Reading habit.

Dependent variables	Parameter	B	Wald Chi Sq	Df	Sig.	Exp(B)
Interest in general Science Materials and Classes	Numbers of General readings	.605	2.673	1	.102	1.052
	Frequency of general readings	.244	1.163	1	.281	1.274
	Frequency of science Readings	.050	7.882	1	.005	1.832
Academic Performance in General Science Course	Number of General readings	-.024	.686	1	.408	.976
	Frequency of general reading	.329	2.470	1	.116	1.390
	Frequency of science Reading	-.082	.178	1	.673	.921

Table 4, shows that only reading of science material significantly predict interest in science materials. The positive B value (.050) shows that for every unit increase in reading of science material there will be a significant 5% increase in the respondents interest in science classes and materials. None of the other reading habit dimensions predicted the academic performance in general science education courses.

Only reading science material statistically predict interest in general science education materials and classes.

As can be seen from this result, it is logical that students that have flare for reading general science materials and classes will equally have interest in the same. This agreed with the result of Daniel et al.(2017) that explained that interest affect reading habit and vice versa.

- e. Research hypothesis 1:** There's no correlation between non-science pre-service teachers' reading habit and their academic achievement, and their interest in general education science courses.

Table 5: Correlation between Reading Habit and interest in science materials and academic performance in general science education course of non-science pre-service teachers

		Number of General Readings	Frequency of general Readings	Frequency of Science Reading
Interest in general science materials	Coefficient	.081	.147*	.233**
	Sig.	.204	.021	.000
Academic performance in general science courses	Coefficient	-.041	.106	.029
	Sig.	.526	.097	.651

Correlation is significant at the 0.05 level (2-tailed).*

Correlation is significant at the 0.01 level (2-tailed).**

From table 4, there exists a weak statistically significant weak correlation between interest in science materials and reading habit of reading science materials and frequency of reading generally at p-value .0001 and .021 ($p < .05$) respectively as expected while there is no significant correlation between academic performance in general science education courses and reading habit.

Decision: Table 5 shows that there were positive significant relationship between student science reading habit and student interest in general science materials and classes ($r = 0.233, P < .01$), and frequency of general readings ($r = .147, p < .05$). Therefore, the alternative hypothesis is accepted, and the null hypothesis is rejected. This result agreed with the findings of Daniel et al. (2017)

The null hypothesis is not rejected for the association between academic performance in general education science and the three dimensions of reading habit tested in this study. This finding do not agreed with findings of several authors (Popoola et al., 2020; Balan, Katenga & Simon, 2019; Florence, Adesola, Alaba, & Adewumi, 2017; Anyaegbu, 2016).

- f. **Research hypothesis 2:** There is no significant difference in the general science readings and interest in general science materials and classes among male and female non-science major pre-service teachers

Table 6: T-test to compare the mean of interest in general science materials and classes, and Reading of General Science Readings among male and female students

Levene test t test for equality of means

		F	Sig	t	df	Sig	Mean difference	Std error difference
INTSCE* assumed	Equal variant	.004	.951	1.164	245	.246	.17424	.14972
	Equal variant			1.147	172.104	.253	.17424	.15192
READSC* assumed	Equalvariant	1.078	.300	3.302	245	.001	.28178	.08533
	Equal variant			3.061	144.048	.003	.28178	.09207

*INTSCE- interest in general science materials and classes

*READSC- general science readings

Table 6 reveals that at $F=0.004$ and $P>0.05$ for interest in general science materials and classes $F =1.078$ and $P>0.05$ for general science readings, showing that there were no significant difference in the general science readings and interest in general science materials and classes among male and female non-science major pre-service teachers. Therefore, the alternative hypothesis is rejected, and the null hypothesis is accepted.

Conclusion

This study has considered the influence of reading habit (independent variable) on non-science major pre-service teachers' academic performance in and interest in reading general science education materials (dependent variables) in the Federal College of Education Abeokuta. There are very scanty researches on reading habit and its influence on interest in particular subject or courses, though few literature exist on the influence of reading habit on academic performance in some courses but not in general science education among non-science majors in the field of education. Reading habit in this study is defined by three parameter : number of general readings, frequency of general readings and frequency of science reading. This study has shown that there exist a very poor reading habit among the respondents, and that their academic performance could have been due to other factors that are outside reading habit which explained why their academic performance do not have any significant relationship or association with their

reading habit. If students can perform well in examination without reading properly and at acceptable frequencies, there chance of developing a reading habit will be slime and this portend grave danger to intellectual and economic development of the nation in all sector. The students will be certificated in schools but will remain largely ignorant even close to being considered as uneducated.

Recommendations

Based on these findings the follows recommendations are made:

1. Reading comprehension in diverse fields including sciences should be made a compulsory part of teaching and assessment from the basic schools in order to cultivate good reading habits.
2. Schools should be encouraged to give reading targets to their students while parents are co-opted to record their ward progress on daily basis from the basic classes so as to develop good and healthy reading habit.
3. Due to the fact that a reading teacher will be a good role model to encourage a positive and progressive reading habit in the pupils, pre-service teachers should have courses that are focussed on motivating them to read widely. In each semester, list of reading materials should be given to student teachers and be tested on continuous assessment basis. This will also allow them to discover areas of interest beyond their course of study and make them very informed.

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