

Reading habit and interest as correlates of students' academic performance in physics in secondary schools in Ekiti state, Nigeria

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Abstract

The study investigated reading habit and interest as correlates of students' academic performance in Physics in Secondary Schools in Ado Local Government Area of Ekiti State, Nigeria. The study adopts descriptive survey of research design. The population for this study consists of all students in Senior Secondary School II (SSS 2) offering Physics as a subject in all the public Secondary Schools in Ado Local Government Area, Ekiti State. Stratified random sampling technique was used to select twenty (25) Physics students each from each of the six (6) selected SSS class II in Ado LGA of Ekiti State, Nigeria. A total of one hundred (150) SSS II Physics students were used as samples for the study. Two null hypotheses were formulated and tested at 0.05 level of significance. The instrument for this study was self-designed questionnaire. The data collected were analysed using correlation statistical analysis package. The results of the analyses showed that there is significant relationship between the students' reading habit and academic performance in Physics in secondary schools and it also revealed that there is significant relationship between the students' interest in Physics and academic performance in Physics in secondary schools. Based on the findings of the study, conclusion and recommendations were made.

Keywords: Reading, Habit, Interest, Reading habit and interest in Physics

1. Introduction

Globally, Physics teaching and learning gains prominence on daily basis simply because of the consistent emphasis on science and technology due to its application in industrial development. Such situation cannot be said to be restricted to developed nations since most developing countries including Nigeria also lay emphasis in the learning of Physics.

Recent development reforms in the educational system in Nigeria have also focused on effectiveness of Physics teaching and learning. Over the last two decades there are reflections across nations that teaching and learning of Physics is problematic (Harlen, 2009) ^[10].

Unfortunately however, efforts made so far to improve the teaching and learning of Physics across the globe has not yielded the much needed results and therefore deserves further attention. Students fear Physics so much that anyone who enrolls in it is looked upon with awe, because the course is believed to be difficult and not easy to pass in examination (Olasehinde, 2008) ^[16].

Learning which starts right from birth entails acquiring knowledge about various phenomena and understanding them. The more a person reads, the more he learns. Reading, which Orasamu (2012) ^[17] defined as the art of interpreting printed and written words, is one of the most effective processes of conscious learning and sometimes, it influences the extent and accuracy of information as well as the attitudes, morals, beliefs, judgment and action of readers. A creative and pragmatic education involves the habit of personal investigation. The art of personal investigation requires self-study to be followed by self-thinking and analysis. Self-study, otherwise referred to as reading at one's own accord, requires a habit, which, according to Smith (2012) ^[19] is known as reading habit. Reading makes way for a better understanding of one's own experiences and it can be an exciting voyage to self-discovery. "The reading habit

is best formed at a young impressionable age in school, but once formed it can last one's life" (Green, 2001) ^[7].

To know about the world and its environment, a child helps himself through reading books, newspapers and other magazines (Deavers, 2007) ^[3]. Once the child has been taught to read and develop a love for books, he can explore for himself the wealth of human experience and knowledge. Children, missing the opportunity of getting in touch with books at this stage, find it hard to acquire reading habit in their later years. According to Fisher (2001) ^[5] "... reading is an intellectual action which is possible only if a man has formed a habit of reading and practicing it since childhood". The reading habit, therefore, plays a very crucial role in enabling a person to achieve practical efficiency. "Laws die but books never." Indeed, books are the most suitable medium through which knowledge is transmitted from generation to generation. Gallo (2007) ^[6] enthused, "books, yield their best to you, if you read them at the age at which each particular masterpiece can ideally be chewed and digested".

There is little knowledge about the everyday reading practices of tertiary education students and how these practices affect their academic achievement. Everyday reading consists of individuals' reading activities for a variety of purposes, such as for relaxation or information. Previous research has documented that, from middle childhood through adulthood, reading becomes a major component of studying, and much information learned through studying is initially acquired through reading. The everyday reading activities in which students engage may, therefore, considerably influence their studying skills and subsequent academic performance. There is a general sense in which one appreciates the link between good habits of reading and the academic performance of students generally. Nigeria, like other African countries, adopts the English Language as its official language of communication or

Lingua Franca. This has a great implication for the formation of good reading habits among Nigerians, especially, the youths who have to study and learn in a second language and outside of their mother tongue. To form the good habits of reading, therefore requires constant and continual practice on the part of the learner.

The term "habit" has been defined as "something that you do often or regularly" (Grellet, 2007) [8]. On its own part, "reading" is the act of getting meaning from printed or written words, which is the basis for learning and one of the most important skills in everyday life (Guthrie, Benneth & McGough, 2007). This explains why reading is usually associated with books as only the written words provide a complete picture of the act of reading. There is no doubt that through reading, the individual is able to build or fix things, enjoy stories, discover what others believe and develop ideas/beliefs of their own. Thus, reading provides the key to all forms of information necessary for our day-to-day survival and growth. Broadly, reading is linked closely with other uses of language and with thinking. Central to the concept of reading is its dependence on the readers' memory and experience in order to understand what is read. It also involves how well a reader remembers, uses and reacts to the materials read; stressing such skills as word recognition, vocabulary development and comprehension.

It follows then that if you are in the practice of reading regularly without thinking about it because of the permanence of its continuity, one can conclude that good reading habits have been formed. This is because a habit has been formed when an individual does something many times unconsciously having become a part and parcel of such a person's life. Hence, reading habits have been conceived as positive in that they have the potency to contribute meaningfully to the growth, development and progress of such individuals as engaged in the habits. Incidentally, many Nigerian students do not belong in the category of those with good reading habits. Their poor/bad reading habits could be partly held responsible for general poor performance that the school systems usually record in both internal and external examinations. This affects all aspects of their examinable subjects but most especially the English language examination, which also serves as the general medium of official communication and conduct of all examinations. Perhaps, due to lack of good reading habits among the students, academic performance with respect to their examination results had been dismal, nowadays creating a great source of worry and concern to all stakeholders in the educational sub-sector.

Even the cankerworm of examination malpractices may be traceable to the prevalent poor reading habits and lack of interest among the wide spectrum of students. In addition, the by-products of scientific and technological inventions and innovations have also contributed greatly to the dwindling fortunes of the good practice of reading among majority of the students. Today, many of them prefer to watch cinemas and other shows on the television, audio-CD, video-CD and playing video-games to reading. The setting and atmosphere of "crashed programmes," quite prevalent in the school systems today have not been supportive to the development of the good practice of reading. Thus, the enthusiasm associated with the urge to engage in reading practices voluntarily, pleasurably and extensively are almost nearly absent among the greater number of students in the schooling systems today.

People's beliefs about their abilities in particular domains are thought to be important in motivating them to do what they can do to achieve (Haw, 2004) [11]. The three aspects that have received the most attention are self-efficacy defined as confidence in one's abilities to successfully perform a particular task, outcome expectancy defined as beliefs that a particular behavior will result in particular outcomes and causal attribution defined as one's judgment about what causes success or failure to perform task.

Bandura (2007) introduced the concept of self-efficacy as a key component in social cognitive theory in the late 1970's and it has been found to be an important predictor of student achievement in science (Zimmerman, 2010) [20]. Academically therefore, students' interest refers to one's perceived capability to perform given academic tasks at the desired level. Self-efficacy is related only to performance expectation and does not depend on the value placed on the task (Hawthorne, 2004) [12].

Students have confirmed strong relationship between students' interest. For example Zimmerman (2010) [20] review of the major finding into students' interest beliefs concludes that they are positively related to motivation. Researchers have found that students who are self-efficacious are more likely to undertake difficult and challenging tasks than students who are not self-efficacious. They are also more likely to exert more effort and to persist longer in the face of difficulties. It has been found that perceived self-efficacy influences students' method of learning as well as their motivational processes. Students who are self-efficacious appear to use more self-regulating strategies which lead to higher achievement in science (Hawthorne, 2004) [12].

Interest is a feeling of curiosity or concern about something that makes attention turn towards it (Encarta Dictionary, 2004) [4]. Krapp (2002) [14], in a study of educational psychological theory of interest and retention in relation to SDT contended that traditionally, there have been two major points of view from which interest has been approached. One is interest as characteristic of a person and the other is interest as a psychological state aroused by specific characteristics of the learning environment. Traditionally, the former approach has been termed topic interest or personal interest and the latter has been called situational interest. Similarly, Jari, Reijo, Kalle, Veijo and Anna, (2012) [13] examined students interest in Physics: A survey in Finland, and found that unlike personal interest, which is always specific to an individual, situational interest is assumed to be spontaneous, fleeting, and shared among individuals.

Several researchers have also demonstrated that students' interest, perceptions are also good predictors of reasonable generalized performance such as obtain grades in science subjects. In a most recent work by Adedeji, Adeyinka & Olufemi (2009) [1] on locus of control interest in schooling, students' interest and academic achievement, the researcher reported that students' interest made contribution on students' academic performance in science. The explanation by Owe (2008) [18] based on this result is something to go by when he said that those who have a sense efficacy in mastering academic task tend to learn better in tertiary institution environment particularly in science courses.

It is evidently seen from the above that students' reading habit and interest seems to have significantly impact on students' academic performance in sciences.

2. Purpose of the Study

The purpose of this study was to investigate the reading habit and interest as correlates of students’ academic performance in Physics in Secondary Schools in Ado Local Government Area of Ekiti State, Nigeria.

3. Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant relationship between the students’ reading habit and academic performance in Physics in secondary schools.
2. There is no significant relationship between the students’ Interest and academic performance in Physics in secondary schools.

4. Methodology

The study was a descriptive survey of research design which was questionnaire based. The survey allows for proper description of students variables (Reading Habit and interest in Physics) as the effect on students’ academic performance in physics. The target population for this study comprised of all

students in Senior Secondary School II (SSS2) offering Physics as a subject in all the public secondary schools in Ado Local Government Area of Ekiti State, Nigeria.

Stratified random sampling technique was used to select twenty (25) Physics students each from each of the Six (6) selected Senior Secondary Schools in class II from Ado Local Government Area of Ekiti State. A total of one hundred (150) students were used as samples for the study.

The research instrument for the student was self-designed questionnaire which comprises of two sections. The first section consisted of students’ bio-data and the second section comprises of several questions (20 items each on Students’ reading habit and interest in Physics) eliciting relevant information from the Physics students. The face and content validity of the instrument was established.

5. Results and Discussion

5.1 Results

A) Research Hypothesis 1

There is no significant relationship between the students’ reading habit and academic performance in Physics in secondary schools.

Table 1: Pearson’s Product Moment Correlation showing the relationship between the students’ reading habit and academic performance in Physics in secondary schools

| Variables | N | X | SD | df | r-cal | r-tab | Remark |
|--------------------------------|-----|-------|------|-----|-------|-------|--------|
| Students’ Reading Habit | 150 | 65.50 | 5.84 | 298 | 0.761 | .165 | * |
| Students’ Academic Performance | 150 | 57.62 | 6.66 | | | | |

$P < 0.05$, * = significant

Table 1 shows the relationship between the students’ reading habit and academic performance in Physics in secondary schools. The result obtained from the analysis shows that the value of r-cal (0.761) is greater than r-table value (0.165) at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that there is significant relationship between the students’ reading habit and academic performance in Physics in

secondary schools.

B) Research Hypothesis 2

There is no significant relationship between the students’ interest and academic performance in Physics in secondary schools.

Table 2: Pearson’s Product Moment Correlation showing the relationship between the students’ interest and academic performance in Physics in secondary schools

| Variables | N | X | SD | df | r-cal | r-tab | Remark |
|--------------------------------|-----|-------|------|-----|-------|-------|--------|
| Students’ Interest in Physics | 150 | 47.65 | 2.65 | 298 | 0.682 | .165 | * |
| Students’ Academic Performance | 150 | 48.55 | 4.12 | | | | |

$P < 0.05$, * = significant

Table 2 shows the relationship between the students’ interest in Physics and academic performance in Physics in secondary schools. The result obtained from the analysis shows that the value of r-cal (0.682) is greater than r-table value (0.165) at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implies that there is significant relationship between the students’ interest in Physics and academic performance in Physics in secondary schools.

5.2 Discussion

The results of the study were discussed based on the two null hypotheses formulated and tested at 0.05 level of significance. As shown in table 1, there is significant relationship between the students’ reading habit and academic performance in Physics in secondary schools. The findings agreed with that of

Guthrie, Benneth & McGough (2007), Gallo (2007) [6] and Orasamu (2012) [17] that good reading habit is a key factor to a better academic achievement.

Similarly, as shown in table 2, that there is significant relationship between the students’ interest in Physics and academic performance in Physics in secondary schools. The findings agreed with that of Adedeji, Adeyinka & Olufemi (2009) [1] on locus of control interest in schooling, students’ interest and academic achievement, that students’ interest made contribution on students’ academic performance in science. It also agreed with the finding of Hawthorne (2004) [12] Owe (2008) [18] and Jari, Reijo, Kalle, Veijo and Anna, (2012) [13] that Students who are self-efficacious appear to use more self-regulating strategies which lead to higher achievement in science.

6. Conclusion

Based on the results of this study, it can be concluded that:

- There is significant relationship between the students' reading habit and academic performance in Physics in secondary schools.
- There is significant relationship between the students' Interest in Physics and academic performance in Physics in secondary schools.
- Reading habit of students has significant contribution to students performance in science courses especially Physics.
- Students' interest in physics has serious effect on the performance of students in science.

7. Recommendations

Based on the findings of this study, the following recommendations were made:

- Parents and teachers should encouraged Physics students to cultivate reading habit. This will enhance their better performance in Physics.
- Students should be motivated to develop interest in Physics improve their performance in the subject.
- Physics courses should be introduced by the teachers to the students in such a way that students would not see it as difficult area of study.

8. References

1. Adedeji LO, Adeyinka AA, Olufemi M. The effect of component task analysis method of instruction on students performance in chemistry, University of Ado. Ade's Publisher, 2009.
2. Bandura A. Correlate of attitude towards science and academic achievement of secondary school students in science subjects. Journal of teachers Education published by the National commission for college of Education Abuja, 1979; 10(1):120-127.
3. Deavers VO. Correlate of Student's Variables and Achievement in Integrated Science. Journal of Educational Research and Development. Faculty of Education. Ahmadu Bello University, Zaria, 2007; 1(2):208-214.
4. Encarta Dictionary. A Bloomsbury Reference Book created from Bloomsbury of World English, 2004.
5. Fisher B. towards Increased Female Participation in science and technology in Nigeria schools. A book of reading the word council for curriculum and instruction, Akoka, Lagos. Jos Publisher, 2001, 206-211.
6. Gallo I. Relationship between Teacher Qualification and Student Academic Achievement in Physics in Senior Secondary School in Yola North Local Government Area of Adamawa State. Unpublished M.Ed Thesis, Federal University of Technology, Yola, Adamawa, Nigeria, 2007.
7. Green M. Between and within domain relations of academic motivation among middle and high efficacy, task value and achievement goals. Journal of Educational psychology, 2001; 93:23-34.
8. Grellet I. Student's Academic Performance Toward Introductory Physics Course. Attitude and Gender Structure and Function. International. Journal of Science Education. Hillsdale, NJ: Erlbaum, 2007; 241-274.
9. Guthrie RG, Benneth HI, McGough AJ. Attitude change: lesson from research and practice. An Australian Journal of Gifted Education, 2010; 11(2):26-34.
10. Harlen AS. Aptitude testing for university entrance, a literature review. National foundation for Educational research, 2009; 2(5):6-10.
11. Haw EM. Self-Concept and Self Efficacy Conceptual Analysis. Paper presented at the annual meeting of the American educational research association in New York, 2004.
12. Hawthorne Z. Impact of metacognitive strategies of textbook reading on students learning of physics in secondary schools. International. Journal of science and Research. 2004, 2(6).
13. Jari L, Reijo B, Kalle J, Veijo M, Anna A. Pupil Interest in Physics: A survey in Finland. Online. Retrieved on, 2013, 2012.
14. Krapp A. An Educational-psychological theory of interest and its relation to SDT, 2002.
15. In Deci EL. Ryan RM. (Eds.), Hand book of Self-determination Research, Rochester NY: University of Rochester, 405-426.
16. Olasehinde M. Report on higher education performance. Retrieved on, 2008. From www.opencongress .org.
17. Orasamu MA. The effects of educational context on individual differences variables self-perceptions of giftedness and school attitude in gifted adolescent. Journal of youth adolescent, 2012; 28:687-703.
18. Owe C. Students' attitude to science. A Journal of Science Education. Trvana University, Slovakia, and Institute of Science Education London, UK, 2008; 88(5):1-24.
19. Smith OM. Relationship Between Students Attitudes To Geography. Unpublished B.sc(Ed). Project Adeyemi College of Education, Ondo, Nigeria, 2012.
20. Zimmerman LM. Relationship between students' attitude to Science and their Achievement in Physics. Scientist pedagogical Experimentalist, 2010.