

INFLUENCE OF PARENTS' VARIABLES ON LOWER PRIMARY SCHOOL PUPILS'
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ONA ARA LOCAL GOVERNMENT AREA, OYO STATE
¹ANIMOLA Odunayo Victor, ²OPELOYE Onaopemipo Nafisat &
³BELLO Theodora Olufunke, Ph.D

INFLUENCE OF PARENTS' VARIABLES ON LOWER PRIMARY SCHOOL PUPILS' ACADEMIC ACHIEVEMENT IN BASIC SCIENCE AND TECHNOLOGY IN ONAARA LOCAL GOVERNMENT AREA, OYO STATE

¹ANIMOLA Odunayo Victor, Ph.D, ²OPELOYE Onaopemipo Nafisat & ³BELLO Theodora Olufunke, Ph.D

Institute of Education,
Obafemi Awolowo University,
Ile-Ife, Nigeria

E-mail: ¹victorlee4life@gmail.com, ²oopeloye26@gmail.com & ³bledora@yahoo.co.uk

Abstract

The study assessed the influence of parents' variables on lower primary school pupils' academic achievement in Basic Science and Technology in Ona Ara Local Government area, Oyo State. The study adopted the ex-post-facto research design. The study population comprised all lower primary three school pupils in Ona Ara Local Government, Oyo State. The sample consisted of 400 Lower Primary School Pupils Three who were selected using multistage sampling procedure. Two instruments were used for data collection namely "Parent Socio-economic Status Rating Scale" (PSSRS) and Pupils Previous Term Result in Basic Science and Technology (PPTRBST). The results showed that there was significant relationship between parents' educational qualification and pupils' academic achievement in Basic Science and Technology ($F = 4.810$; $p < 0.05$); there was no significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology ($F = 0.383$; $p > 0.05$) and there was no significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology ($F = 0.943$; $p > 0.05$). The study concluded that parents' educational background had influence on pupils' academic achievement in Basic Science and Technology in lower primary schools.

Keywords: Qualification, Academic Performance, Socio-economic Status

Introduction

Science education is the foundation for sustainable development by protecting human societies from ignorance, illiteracy, disease and poverty. For any country to experience both technological and economic development there must be strong, stimulating growth in the teaching and learning of science (Nwagbo & Ovute, 2011). Science is the systemic enterprise of gathering knowledge about the world, organizing and condensing that knowledge into testable laws and theories (Hornby, 2010). According to Rao (2007), science is the system of knowing the universe through data collected by observation and controlled experimentation. Science is the strong base which the main part of present day technological breakthrough is built.

Science is the knowledge obtained from the systematic study of the structure and behaviour of the physical world, especially by observing, measuring, experimenting and the development of theories to describe the results of these activities (Ajayi & Ogbeba, 2017). Today, nations all over the world are becoming scientific and all proper functioning of lives depend greatly on science.

The primary aim of science is to find out general explanation, understanding, prediction and control of natural events around us. Nations that are considered to be developed and largely considered as civilized have achieved this status through purposeful scientific education of their citizens (Ajayi & Ogbeba, 2017). The objectives of Basic Science and Technology at primary school level is to enable the pupils to develop interest in science and technology; acquire basic knowledge and skills in science and technology; apply their scientific and technological knowledge and skills to meet societal needs; take advantage of the numerous career opportunities offered by science and technology; to become prepared for further studies in science and technology; avoid drug abuse and related vices; and be safety and security conscious (NERDC, 2012). Science is the knowledge about the physical or natural world based on facts that can be experimentally proven (Animola & Bello, 2019). It further stated that is the combination of human efforts to understand the antecedence of the world of nature as well as its mechanics providing substantial physical prove as the bedrock for such assumptions and understanding. This is done through the observation of natural occurrences coupled with the experimentation that seeks to improve natural processes subject to controlled conditions. Thus, science can be regarded as a continuous search for explanation of phenomena in nature (Oni, 2008). For a nation to develop, more attention must be given to Basic Science and Technology in schools at the primary stage of schooling in order to lay the basic foundation for its development (Oloyede, 2009).

Primary education is very crucial in the lives of children. Lower primary education is a type of education that is given right from age five till age eight years within Nigerian context. It is so crucial, as it is the basic educational level at which children from five to eight (5 - 8yrs) are exposed to formal education. Childhood education is as old as man and there is keen interest in how children learn and in what they learn. Childhood is a time of incredible development and growth from cognitive, social, physical, emotional and psycho-social development. It is the formative period of a child's life, when the development is fast. Children at this stage of development are largely influenced by their environment and hence the need for a flourishing environment in order to make this stage significant. Everyday life experiences can make science to be meaningful to pupils (Campbell, 2000). If it is wished to educate students as scientifically literate citizens, everyday-life experience related to science is necessary in schools (Greenmiller, 2014). It is also an argument about constructivist view on learning, in which students' alternative conceptions derived from their day-to-day experiences before the classroom instructions and has been seen as a starting point in teaching (Smith, Disessa & Rochelle, 1993). Isolating the school science from students' everyday-life

experience could make students develop two unconnected knowledge related to science: one is used to solve science problems in schools, and the other is used for their everyday-lives (Costu, 2008). One of the factors that make learnt things permanent is connecting them with daily life (Urek & Dolu, 2013). This could have impact on academic achievement of pupils in learning of Basic Science and Technology at lower primary school level.

Academic achievement according to Joshs (2010) is defined as knowledge acquired and skills developed in school subjects, generally indicated by marks obtained in tests and in an examination. Adeyemo (2011) stated that academic achievement means achievement a student makes in school namely; his marks in the examination, which is the criterion for the achievement of a student. Academic achievement of pupils in basic science and technology especially at the primary school level is not only a pointer to the effectiveness or otherwise of schools but a major determinant of the future of youths in particular and the nation in general in science. The medium through which attainment of individuals and the nation's educational goals in science and technology can be achieved is learning of basic science and technology. Hence, virtually everybody concerned with education lay more emphasis on academic achievement of students thus excellent academic achievement of students is often the expectation of parents and policy makers (Osiki, 2001).

However, several studies such as that of Famakinwa and Bello (2015), Olajide and Aladejana (2016), and Agboola and Abe (2017), were carried out to improve the teaching and learning of Basic Science and Technology. Despite various efforts to improve the teaching and learning of the subject in Nigeria by different researchers, Olajide (2017), observed that Nigerian educational system is still confronted with poor academic performance of students in Basic Science and Technology. This has been the major concern of parents, teachers, science educators, educationists, examination bodies and the general public (Animola & Bello, 2019). The prevalence of poor achievement in science is attributed to so many factors such as poor teaching methods and improper use of instructional materials, large class size, non-availability of well-trained teachers, poor vocabulary and word association, students' poor understanding of basic concepts in science, teaching science in foreign language such as English, rather than learners' native language, inability to interpret correctly science words encountered in science textbooks and in everyday use of English Language and learning science through a second language, students misconception in Basic Science and Technology and parent variables like socio-economic status (Lawal, 2009; Ogunshola & Adewale, 2012). One of the factors attributed to the poor performance of students in science is the parent variables.

Formerly, parent variables were not considered as impacting factors on pupils' academic achievement. However, as time passed, it became apparent that the social, as well as the economic status of a child has great impact on the academic achievement. Socio-economic status is a sociological and economical combined

total measure of a person's work experience and of an individuals or family's economic and social position relative to others, based on income, education and occupation (Marmot, 2004). When observing a family's variables like socio-economic status, the household income, earners' education and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed. It is the evident from the definition that few elements are common in defining socio-economic status. So, it can be stated as relative social and economic position of an individual with regard to the income, education, occupation and other related factors in a combined socio-economic perspective. On the basis of these indicators or factors of SES people of a society are divided into three major categories of high, middle and low class (Akhtar & Niazi, 2011).

The relation of parent income, occupation and education are so embedded that the training of a child can be said to be dependent upon the three said pillars. The academic performance of the child has relationship with the child rearing practices adopted by the parents at home where not only the socio-economic status of parents plays its role but educational level of parents also contributes its part (Ogunshola & Adewale, 2012). Studies had repeatedly found out that socio-economic status affects students' learning outcomes (Jeynes, 2002; Eamon, 2005). Students from low income home may suffer because there may be no money to pay school fees, purchase books, uniforms, and other school materials. Such children may play truant, their performance in school may be adversely affected and drop out of school (Hochschild, 2003; Eamon, 2005). Similarly, good parenting supported by strong economic home background could enhance strong academic performance of the students (Charles, 2013). The more parents have good economic status, the more likely better chances are found for their children to excel in academics. As the finding of a study supported the similar viewpoint that parents with high level of education serve as motivation factors for children making them to go for higher education (Ogunshola & Adewale, 2012).

Research shown that children from low social economic status households and communities develop academic skills more slowly compared to children from higher socio-economic status group. Aiken and Barbarin (2008) noted that, the school system in low social economic status communities often have lean resources and this has negatively affected student's academic progress, whereas students who relate to high SES are usually high achievers as they have open opportunities and facilities that are necessary to accelerate the progress in academics. The people who belong to a low or average SES classes face lack of resources and facilities, and that is why their achievement is relatively low and they are less likely to be successful (Akhtar & Niazi, 2011). Parents of different occupational classes often have different styles of influence on their children in school, different ways of disciplining their children and different ways of reacting to their children. These differences do not express themselves consistently as expected in the case of every family, rather they influence the average tendencies of families for different occupational classes (Caroline, 2007). In line with the above assertion, Orodho (2004) has also argued that

socio-economic status of parents does not only affect the academic performance, but also makes it possible for children from low background to compete with their counterparts from high socio-economic background under the same academic environment.

In the same vein, Machebe (2014) posited that parental economic status could influence school children as to bring about flexibility to adjustment to the different school schedules. Oni (2007) and Omoegun (2007) had averred that there is a significant difference between the rates of deviant behavior among students from high and low socio-economic status. The health status of the children which could also be traceable to parental socio-economic status, can be another factor that can affect the academic performance of the students, as reported in Adewale (2002) that in a community where nutritional status is relatively low and health problems are prevalent, children academic performance is greatly hindered. This assertion is again hinged on nature of parental variables like socio-economic status. Evidences from several studies conducted at different times and places revealed the interest of many sociologists and academicians regarding the exploration of effect of SES on academic achievement of students (Shah, Atta, Qureshi & Shah, 2012; Machebe, 2014). Studies on parent variables on students' academic achievement is still inconclusive. Keeping this in view and relating it to current and prevailing socio-economic conditions of indigenous society, it is imperative to empirically explore the possible influence of parent variables like socio-economic status (Income, education and occupation) on pupil's academic achievement in Basic Science and Technology in lower primary schools in Ona Ara Local Government Area of Oyo State.

Purpose of the Study

This study aimed at investigating the influence of parents' variables on lower primary school pupils' academic achievement in Basic Science and Technology in Ona Ara Local Government Area in Oyo State.

Specifically, this study sets out to:

- i. assess the influence of parents' educational qualifications on lower primary school pupils' academic achievement in Basic Science and Technology in Ona Ara Local Government Area;
- ii. examine the influence of parents' occupation on lower primary school pupils' academic achievement in Basic Science and Technology in the study Area; and
- iii. determine the influence of parents' income on lower primary school pupils' academic achievement in Basic Science and Technology in the study Area.

Hypotheses

The following hypotheses were formulated to guide the study;

- H₀1: There is no significant relationship between parents' educational qualification and pupils' academic achievement in Basic Science and Technology in lower primary school in Ona Ara Local Government Area.

- H₀2: There is no significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology in lower primary school in the study Area.
- H₀3: There is no significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology in lower primary school in the study Area.

Methodology

The research design for this study is an ex-post-facto research design. The population for the study comprised all the lower primary school pupils three in Ona Ara Local Government, Oyo State. The sample for the study consisted of 300 lower primary school three pupils in Ona Ara Local Government, Oyo State. A Multi stage sampling procedure was used to select the sample for the study. One senatorial district was selected among the three senatorial districts using simple random technique. One local government area was selected from the selected senatorial district using simple random sampling technique. Ten primary schools were selected from the local government using simple random sampling technique. From each of selected school, one primary three intact classes were selected for the study. Two instruments were used for the study namely "Parent Socio-economic Status Rating Scale" (PSSRS) and Pupils Previous Term Result in Basic Science and Technology (PPTRBST). The instrument for data collection was validated by three experts in Test and Measurement in the Faculty of Education. Some necessary corrections and adjustments were made to the instrument in order to ascertain the content validity of the instrument. Pilot test was carried out to determine the reliability of the instrument. The instrument was administered on some selected parents of primary school pupils outside the study area but having similar feature with the pupils used for the study. Test re-test method was used to generate two sets of scores and Pearson Product Moment Correlation was used to calculate the reliability coefficient of PSSRS and was found to be 0.70. The Pupils Previous Term Result in Basic Science and Technology (PPTRBST) was a primary data retrieved from the selected primary schools record. Previous Term Results in Basic Science and Technology (PPTR) was the achievement results of the pupils in the last term assessment in Basic Science and Technology collected from their various School. The Frequency counts and percentages were used for the demographic analysis data of the respondents. The hypotheses were tested using Linear Regression analysis.

Results

Information on socio-demographic variables of the respondents' parents collected using the questionnaire were collated, analysed and presented in Table 1 to Table 4.

Table 1: Distribution of respondents' parents by their level of academic qualification

Academic Qualifications	Frequency (f)	Percentage (%)
PSLC	69	23.0
JSSLC	18	6.0
SSCE	66	22.0
NCE/ND	63	21.0
BSC/BED/HND	66	22.0
MSC/PHD	18	6.0
TOTAL	300	100

From the Table 1 above, it was observed that 69(23.0%) of the pupils came from home whose parents' highest educational qualification was primary school leaving school certificate. 18 (6.0%) of the pupil's parents has junior secondary school leaving certificate as their highest educational qualification. 66(22.0%) of the pupil's parents has senior school certificate examination as their highest educational qualification. 63(21.0%) of the respondent's parent possessed National Certificate on Education (NCE) or National Diploma Certificate. 66(22.0%) of the pupil's parent possessed Higher National Diploma/Bachelor of Science/Bachelor of Education certificate while 18 respondents representing 6.0% parents possess Master's Degree Certificate or Philosophy of Education degree. The analysis shows the large portion of the sample pupils came from parents' whole parents were academically poor.

Table 2: Distribution of respondents' parents by their occupation

Parental Occupation	Frequency (f)	Percentage (%)
Civil Servant	132	44.0
Trader	42	14.0
Artisan	72	24.0
Farmer	42	14.0
Domestic Servant	9	3.0
Unemployed	3	1.0
Total	300	100

From the Table 2, 132 respondents representing (44.0%) of the pupils have their parents' civil servant; 42 respondents representing (14.0%) parents were traders; 72 respondents representing(24.0%) parents were artisan; 42 respondents representing (14.0%) parents were farmers; 9 respondents representing (3.0%) parents were domestic servants and 3 respondent representing (1.0%) parents were unemployed. The analysis revealed that majority of the sample pupil's parent were civil servant.

Table 3: Distribution of respondents' parents by their monthly income

Monthly Income	Frequency (f)	Percentage (%)
Below 30, 000	42	14.0
31, 000 – 50, 000	12	4.0
51, 000 – 70, 000	54	18.0
71, 000 – 100, 000	63	21.0
100, 000 – 150, 000	57	19.0
151, 000 – 200, 000	33	11.0
200, 000 above	39	13.0
Total	300	100

From Table 3 above, 42 respondents representing (14.0%) of the parents earn below N30,000 monthly. 12 respondents representing (4.0%) of the parents earn between N31,000 to N50,000 monthly. 54 respondents representing (18.0%) parent earn between N51,000 to N70,000 monthly. 63 respondents representing (21.0%) parents earn between N71,000 to N100, 000 monthly. 57 respondents representing (19.0%) parents earn between N100,000 to N150, 000 monthly. 33 respondents representing (11.0%) parents earn between N151,000 to N200, 000 monthly while 39 respondents representing (13.0%) of the parents earn above N200, 000 monthly. The analysis revealed that majority of the sample students were from middle socio economic status background.

Table 4: Distribution of pupils' academic achievement by their previous term's results in BST

Grade	Frequency (f)	Percentage (%)
Distinction	63	21.0
Good	58	19.3
Credit	78	26.0
Pass	41	13.7
Fail	60	20.0
Total	300	100

From the Table 4 showed that 63 pupils representing (21.0%) of the total sample pupils had distinction in their Basic Science and Technology results. 58 respondents representing (19.3%) of the pupils had good in their result. 78 respondents representing (26.0%) of the sample pupils had credit in their result. 41 respondents representing (13.70%) of the sample pupils had pass in their result while 60 respondents representing (20.0%) of the pupils fail their result. The analysis show that majority of the pupils had credit and above in basic science and technology.

Hypothesis One: There is no significant relationship between parents' educational qualification and pupils' academic achievement in Basic Science and Technology in Ona Ara Local Government Area.

Table 5: Linear regression of the relationship between parents' educational qualification and pupils' academic achievement in Basic Science and Technology

Model	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Regression	1315.079	1	1315.079	4.810	.029 ^b
Residual	81468.957	298	273.386		
Total	82784.037	299			

(F = 4.810; p < 0.05)

The results in Table 5 showed a significant relationship between parents' educational qualification and pupils' academic achievement in Basic Science and Technology in Lower Primary Schools in Ona Ara Local Government Area (F = 4.810; p < 0.05). Hence, the null hypothesis that states that there is no significant relationship between parents' educational qualification and students' academic achievement in Basic Science and Technology in Lower Primary Schools in Ona Ara Local Government Area is thus rejected. The results imply that parents' educational qualification significantly predicts pupils' academic achievement in Basic Science and Technology in Ona Ara Local Government Area.

Hypothesis Two: There is no significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology in lower primary school in the study Area.

Table 6: Linear regression of the relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology

Model	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Regression	106.173	1	106.173	.383	.537 ^b
Residual	82677.863	298	277.442		
Total	82784.037	299			

(F = 0.383; p > 0.05)

The results in Table 6 showed that there is no significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology in Lower Primary Schools in the study area (F = 0.383; p > 0.05). Hence, the null hypothesis that states that there is no significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology in Lower Primary Schools in the study area is not rejected. The result implied that parents' occupation did not significantly predict pupils' academic achievement in Basic Science and Technology in the study area.

Hypothesis Three: There is no significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology in lower primary school in the study Area.

Table 7: Linear regression of the relationship between parents' income and pupils' academic achievement in Basic Science and Technology

Model	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Regression	261.090	1	261.090	.943	.332 ^b
Residual	82522.947	298	276.923		
Total	82784.037	299			

(F = 0.943; p > 0.05)

The results in Table 7 showed no significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology in Lower Primary Schools in the study area (F = 0.943; p > 0.05). Hence, the null hypothesis that states that there is no significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology in Lower Primary Schools in the study area is not rejected. The result implied that parents' income did not significant predicts pupils' academic achievement in Basic Science and Technology in the study area.

Discussion of Findings

The results of the study revealed a significant relationship between parents' educational qualification and students' academic achievement in Basic Science and Technology in Ona Ara Local Government Area. This indicated that a well-educated parent usually showed interest and care in their children academic performance and their choice of subject and career while in primary school by providing their children all necessary leaning materials. This result corroborated with Obesede (2009) and Abdu-Raheema (2015) who showed that: there is a high positive correlation between parents' educational qualification and academic achievement of students. This finding also substantiated the earlier assertion of Rothstein (2004) who had opined that children who were raised by parents with higher qualification are more inquisitive toward learning compared to those children from low educational qualification. However, the results contradicted the findings of Ogunshola and Adewale (2012) who carried out a research on the effects of parental socio-economic status on academic performance of students. Their result indicated that parents' educational qualification did not have any significance effect on the academic achievement of the students.

In addition, the findings of the study revealed a non-significant relationship between parents' occupation and pupils' academic achievement in Basic Science and Technology. The result is not in line with the findings of Abdu-Raheema (2015) who carried out research on parental socio-economic status and student academic achievement. The result of the study also showed that there was a high positive correlation between parents' occupation and academic achievement of students. However, the results supported the findings of Ogunshola and Adewale (2012) who carried out a research on the effects of parental socio-economic status on academic

performance of students. The result of the study indicated that parents' occupation did not have any significant effect on the academic achievement of the students.

Finally, the finding of the study revealed non-significant relationship between parents' income and pupils' academic achievement in Basic Science and Technology. The result did not support the finding of Ovansa (2017) who revealed that parental annual income majorly influenced the academic performance of the students. However, the result is in line with findings of Ogunshola and Adewale (2012) who reported that parents' income did not have any significance effect on the academic achievement of the students.

Conclusion

The study concluded that parents' variable like educational qualification had significant influence on pupils' academic achievement in Basic Science and Technology while parents' variables like occupations and income do not have significant influence on pupils' academic achievement in Basic Science and Technology in lower primary schools in Ona Ara Local Government, Oyo State.

Recommendations

The following recommendations are made according to the findings of the study.

- i. Parent with lower educational background should intensify their efforts to providing their children with relevant learning materials and conducive learning environment at home to enhance the students' academic achievement.
- ii. Government, multinational companies and public spirited individuals should be able to identify and support intelligent pupils from lower parental educational family with a view to boosting their academic performance.
- iii. Parents who are not educated or have low educational qualifications should endeavour to allow their children to attend remedial summer coaching provided by non-governmental organization during holidays to supplement the regular school programs.

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