

Influence of Achievement Motivation and Family Background on the Academic Performance of Automobile/Metalwork and Building/Woodwork Technology Students in Nigerian Universities.

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Abstract: *The study ascertained the influence of achievement motivation and family background on the academic performance of automobile/metalwork and building/woodwork technology students in Nigerian Universities. The study adopted correlational research design. The study was carried out in the south eastern Nigeria. The states that make up the south eastern Nigeria are: Anambra, Ebonyi, Enugu, Imo and Abia states respectively. The population for the study was 150 automobile/metalwork and building/woodwork technology students in five government owned Universities that offer Industrial Technical Education in the South Eastern, Nigeria. The Universities are: Enugu State University of Technology (ESUT), University of Nigeria Nsukka (UNN), Nnamdi Azikiwe University Akwa (UNIZIK), Ebonyi State University Abakiliki (EBSU) and Michael Okpara University of Agriculture, Umudike (MOUAAU). The entire population of automobile/metalwork and building/woodwork technology students was studied due to manageable size. Therefore, no sampling was carried out. The instrument for data collection was the questionnaire. The questionnaire was made up of two sections; Section A consists of demographic information such as age, gender, parental occupation, parents income. Section B consisted of items on family background variables; (parent's income, family size, parents occupation) that influence academic performance of automobile/metalwork and building/woodwork students. The items that were adapted was structured based on likert five response options. The response options were assigned values as follows: Strongly Agree (SA)= 5, Agree (A)= 4, Undecided (UD)= 3, Disagree (D)= 2, Strongly Disagree (SD)= 1. The instrument for data collection was validated by three experts from three universities within the south east. Their comments, suggestions and advice were used to modify some of the items in the questionnaire. The researchers administered the copies of the questionnaire with the help of three research assistants. Pearson product moment correlations were employed in the research for the data analysis. The study discovered that achievement motivation, family background such as family size, parent income and occupation had a positive relationship with academic performance of the students in Nigerian Universities.*

Keywords; Achievement Motivation, Academic Performance, Family Background, University Environment, Automobile/Metalwork Technology and Building/Woodwork Technology.

Introduction

Achievement motivation is based on the individual desire to excel in a particular task. Whenever a need arises it gives rise to motive and this motive drives an individual's behaviour towards a particular goal. Individual strives to get to that particular goal in order to maintain the state of balance (Mahato & Pranab, 2019). According to Barron (2015), it is a tendency, which describes

people's approach towards the task given to them and a desire to become competent. Achievement motivation is a desire to do well relative to some standard of excellence. It is a social form of motivation involving a competitive desire to meet standards of excellence (Momanyi, & Jackson 2015). Achievement motivation is not a single construct but rather subsumes a variety of different constructs like motivational beliefs, task values, and goals (Wigfield, 2016). Achievement motivation which is highly important for a student's future refers to the learner's internal desire that guides the learner's behaviour towards learning. It is influenced by both internal and external factors. It energizes and directs behaviour toward achievement and therefore is known to be an important determinant of academic success (Acquah, 2017). Achievement Motivation therefore can be seen as one of the driving force behind outstanding academic performance of students.

Student's academic performance which has become an important issue in recent times has been seen by various individuals from different perspective. Academic performance according to Francois and Juan (2017) is the level of achievement in a particular field of study where higher scores indicate better educational understanding. It is the extent to which a student, teacher or institution has attained their short or long-term educational goals in which through examinations or continuous assessments measurement is done (Elliot, 2015). Academic performance is defined as student's report of past semester Cumulative Grade Point Average (CGPA) and their expected Grade Point Average (GPA) for the current semester. The grade point average is now used by most of the tertiary institutions as a convenient summary measure of the academic performance of their students.

The GPA is a better measurement because it provides a greater insight into the relative level of performance of individuals and different group of students. Furthermore, there are inconclusive results over which individual factors successfully predict academic performance, elements such as test anxiety, environment, motivation, and emotions require consideration when developing models of school achievement (Ziedner, 2015). The concept of academic performance has become a source of concern especially in the wake of the declining standards of education. The decline is largely attributed to the many school and non-school related demands and responsibilities. Educators have tried to offer solutions to this problem with numerous researchers and experts attempting to determine what factors influence student performance in academic environments most especially in higher educational sectors like universities. Achievement scores alone neither provide sufficient understanding of the causes of students' success or failure, nor suggest the ways for improving the achievement (Nasir, 2010). However, it is worthy to note that every student has a root in a certain family whose background has traceable impacts in their academic dispositions.

A family is a group of persons related by blood, having one common ancestral heritage and inclination. Family background refers to all the conditions and circumstances in the family which influence the child physically, intellectually and emotionally (Muola, 2010). Family background is the kind of atmosphere in the home front, which on the long run determines the kind of education as well as social and racial origins, financial status, or the type of work experience that one would have. Mante et al, (2015) noted that with some families, the background may vary from time to time for the same individuals. He further stated that because it is parents who are primarily responsible for establishing the family and exercise control over it, they are responsible for the type of family background that exists. This means that parental attitudes are very important in promoting healthy family background, and healthy family background is possible when parents adapt to the culturally defined roles of parents to the needs of the changing young generation (Breiner, 2016). The circumstances at home always affect the student's comprehension in schools even onto their academic performance in the sense that interest to practical oriented courses by family members will strongly determine how much the students will perform. Most times, the job of parents is a construct that can predict the educational achievement, entrepreneurial success, status attainment of a student. Kabiru, (2016) asserted that occupational status measures social position by describing job characteristics, decision making ability and control, psychological demands on the job. Parent's occupation determines the type of education a child receives from parents. According to Ogunshola and Adewale (2012), parents of different occupation classes often have different styles of child rearing, different ways of disciplining their children and different ways of reacting to their children needs.

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 largely because a high occupational class or prestigious occupations tend to promote economic reserves or assets. It presents a source of security by providing a measure of a household's ability to meet emergencies, absorb economic shocks, or provide the means to live comfortably (Hackhausen, 2015). Therefore, Saila and Chamundeswari (2014) expressed that family financial resources, which are mostly associated with parent's occupation and educational attainment, often influence learning opportunities both at home and in school. They concluded that there is a positive relationship between parental level of occupation and academic performance of a student. This correlation has provided proper bases to underline the fact that parents have major influence on student business interest especially when they have entrepreneurial tendencies. Parents who have high value for academics and high intelligence quotient for technical courses will naturally groom their children to become same. This is indicative to how much the students will be motivated in achieving feats in that area of pursuit and most especially within automobile/metalwork and building/woodwork technology.

Automobile Technology is one of the areas of specialization in Technical Education. Automobile Technology is a program developed to equip students with knowledge, skills and attitudes in automobile maintenance, repairs and troubleshooting while metalwork technology equips students with skills and knowledge in forming, cutting, joining and machining among

others (Olawale, 2017). Furthermore, on grounds of visible similarities in automobile technology and metalwork technology; some institutions of higher learning offering technical education prefer the integration of these areas for convenience sake. This area according to Lemo & Olakotan (2017) is called mechanical technology. It is worthy to note that automobile/metalwork technology is an integral part of Technical Education which was introduced into the Nigerian education system because of the awareness of its importance and opportunities for jobs creation in different areas like engine repairs, bodywork scaffolding (Elisha, 2014). Automobile Technology students are individuals acquire necessary knowledge and skills to test, diagnose service and completely repair any fault found on an automobile to the manufacturer's specification (Wright, 2016). Both automobile and metalwork technology are taught together because the curriculum are somehow related. This idea is to enable students to acquire more skills before graduation. Graduates with WAEC certificate can study automobile technology and become mechanic artisans, while some others with a degree certificate can study automobile technology and be called technologist (NBTE, 2004). Metalwork Technology students are individuals who are taught to apply scientific knowledge in the general properties and uses of metal, they are trained on how to differentiate the techniques and approaches for a specific task in metalwork and also taught on how to utilize the safety rules and regulations in metal workshop (Adamu, 2016). In view of the above, Yakubu (2014) stated that for a graduate to create job in the metal works or automobile technology, the graduate must have the following skills: fabrication, welding, casting, assembling, machining and metal finishing. In accordance, Okanya et al, (2019) reported that building/woodwork technology is another integral part of Technical Education which was introduced into the Nigerian education system because of the awareness of its importance and opportunities for jobs creation in different areas such as drawing designs, building construction, furniture making, upholstery and so on.

Building/woodwork technology is achieved through training of individuals in occupational skills in building and woodwork respectively. Students are trained in vast areas of building/woodwork technology which include but not limited to site investigation/survey, block laying, concreting, woodwork, cabinet making and so on Chukwu et al, (2022). Building technology refers to the technical processes and methods used in the constructing buildings. Building technology encompasses; materials and their applications, physical properties, capacities and vulnerabilities; the functioning of components and systems; the principles, procedures and details of building assembly; operating strategies and so on (Darko and Chan, 2018). Students learn some important aspect of building technology which include but not limited to: building plan/design, site investigation/survey, energy supply/efficiency, waste water and water management. Students are expected to practice and become builders after graduation (Chukwu et al, 2020). Woodwork on the other hand is the process of making decorative and useful objects from wood, like cabinets, fine tables, instruments, bowls, and more. It encompasses techniques like carving, joinery and woodturning. Students are also expected to become skillfully empowered after graduation from the programme. Ogbuanya and Ohanu, (2018) stated that to further enhance these programs; Students' Industrial Work Experience Scheme (SIWES) in 1973 was established by the Federal Government of Nigeria to bridge the gap between theory and practice. This introduction was to enable the students acquire entrepreneurial skills and become more technically equipped after they graduate. The role of SIWES in this regard is manifested in the context of the education policy, curriculum design and development, and building/woodwork technology students are part of the students involved in the school-industry linkage vital for labour market-driven skills development. Asogwa and Okanya (2019) believed that the aim of the building/woodwork technology is to provide technical knowledge and vocational skills necessary for industrial development in order to produce skilled young men and women who will create building and woodwork related businesses after graduation. Entrepreneurial skill training has become needful because there is strong call for the nation to become developed through individual self reliance as the value of the citizens is not different from the nation's development. Academic performance in automobile/metalwork and building/woodwork technology can be traceable to the level infrastructural equipping and effective instructional development in the university environment.

A university is an institution of higher (tertiary) education and research, which awards academic degrees in various academic disciplines. The word university can also be termed as community of teachers and scholars (Boa, 2014). A university represents both a higher learning institution and a community of scholars or persons which brings men and women to a high level of intellectual development in the arts and science, and in the traditional professional disciplines, and promotes high-level research (Alemu, 2018). It also signifies a community of persons engaged in study and research which is a source of universal knowledge and highly skilled human power for the professions (Linda, 2017). However, other higher education institutions are also engaged in the training of technical and vocational professional personnel. Universities and other institutions of higher education differ in their mission, goal, functions, the requisite qualification of the faculty, the criteria for admission of students, the duration of programmes they offer, and the type of certification they award (Assié-Lumumba, 2005).

In Nigeria, Universities are engines of growth and development which is increasingly recognized to have a broader role in the social, economic, technological and manpower development of a nation (Adamu, 2016). In fact, the universities serve as the main source of supply of highly skilled manpower needed in the various sectors of the nation. However, Nwakile et al, (2020) argued that the Nigerian system of higher education is binary in nature, as it constitutes universities and non-universities. Universities are mainly directed by their faculties' academic and non-academic staff, while the non-universities sector is made up of monotronics, polytechnics and colleges of education, which provide higher technical education. Their academic sessions run from October to June, and that a session is normally two semesters. A semester consists of thirteen weeks of learning. Akinyemi and Abiddin (2013) stated that the Federal Ministry of Education (FME) is responsible for all federal universities while the State Government is responsible for

the state-owned universities, and the remaining universities are primarily controlled and funded by private investors (such as missionaries, groups of individuals or foreign organisations). Federal Government of Nigeria (2014) acknowledged that university education make optimum contribution to national development by intensifying and diversifying its programme for the development of high level manpower within the context of the needs of the nation. In line with the provision of the policy, Nigeria has established many universities for the production of the much needed manpower for her economic, political, environmental, technological and socio-cultural development (Aguolu, 2002).

From the foregoing, it can be seen that automobile/metalwork and building/woodwork technology are enterprising courses of study. Thus it is expected that with adequate motivation coupled with the tremendous role played by family size, parent's income and parent's occupation on the academic performance of the student, becoming academically sound and beneficial to the society upon graduation is very possible. The examination of the influence of achievement motivation and family background on academic performance of automobile/metalwork and building/woodwork technology students becomes of immediate importance.

Statement of the Problem

The essence of including technical education programmes like automobile/metalwork and building/woodwork technology into universities curriculum is to equip students with relevant knowledge, skills and attitudes to engage in paid and self employments. It is therefore assumed that students will have better academic performance so that they can graduate and engage themselves in self employment. The situation on ground now is far from achieving the objective of automobile/metalwork and building/woodwork technology in Nigerian universities. The students receive training in these courses in Nigerian universities but on graduation find it very difficult to embark on entrepreneurial activities because of poor academic performance while some will not even graduate at expected time or duration because of family challenges. That is, there is currently poor academic performance among automobile/metalwork and building/woodwork technology and majority of students do not have good family support due to the kind of occupation the parents have, number of persons in the family and the kind of parent's income.

The apparent lack of entrepreneurial skills in the graduates renders them ineffective in being profitably employable in recognized industries or being self-reliant as graduates. There is therefore obvious gap between the actual skills-training these graduates received and entrepreneurial prowess they actually need to be functional and earn economic empowerment after graduation. Out of frustration, majority of these unemployed graduates join bad groups and become security threats and automobile/metalwork and building/woodwork graduates may not be exempted.

Also, in Nigeria, there is little or no statistical data to reveal how achievement motivation and family background influence academic performance of automobile/metalwork and building/woodwork students and this requires an investigation. This will provide empirical evidence that can establish the reality on the ground as it relates to the influence of achievement motivation and family background on academic performance of students. The worry of this study was to investigate the extent to which students of automobile/metalwork and building/woodwork technology are being influenced by achievement motivation and family background as it relates to their academic accomplishment and their future plans of being self employed with the use of entrepreneurial skills acquired.

Research Questions

The following research questions guided the study:

1. What is the influence of achievement motivation on the academic performance of automobile/metalwork and building/woodwork students in Nigeria Universities?
2. What is the influence of parental income on the academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities?
3. What is the influence of family size on the academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities?
4. What is the influence of parental occupation on academic performance of automobile/metalwork and building/woodwork students in Nigeria Universities?

Methodology and Procedures

The study adopted correlational survey research design. According to Eze and Ezenwafor (2015), correlational research is a research design used to establish relationship between variables without a manipulation of the variables. Correlational design enables the researcher to measure the variables independently and examines possible existing relationship among the variables. The study was carried out in the south eastern Nigeria. The states that make up the south eastern Nigeria are: Anambra, Ebonyi, Enugu, Imo and

Abia states respectively. This area was chosen because many individuals make use of automobile, metalwork equipment, building and woodwork facilities in their business centers. Also the south eastern Nigeria has well known business areas and educational capacities that attracts people from many parts of the country but does not have adequate qualified automobile, metalwork and woodwork entrepreneurs who can establish automobile, metalwork and woodwork enterprise in the emerging technologies for the benefit of people. The study was also carried out in the south eastern part of Nigeria because the universities in the area have great number of building technology students that were involved in the study. The population for the study was 150 automobile/metalwork and building/woodwork technology students in five government owned Universities that offer Industrial Technical Education in the South Eastern, Nigeria. The Universities are: Enugu State University of Technology (ESUT), University of Nigeria Nsukka (UNN), Nnamdi Azikiwe University Akwa (UNIZIK), Ebonyi State University Abakiliki (EBSU) and Michael Okpara University of Agriculture Umudike (MOUAU). The Information was obtained from the record of students' enrollment in Industrial Technical Education in the five Universities as at 2019/2020 session. The entire population of automobile/metalwork and building/woodwork technology students was studied due to manageable size. Therefore, no sampling was carried out.

The instrument for data collection was the questionnaire. The questionnaire was made up of two sections; Section A consists of demographic information such as age, gender, parental occupation, parents income. Section B consisted of items on family background variables; (parents income, family size, parents occupation) that influence academic performance of automobile/metalwork and building/woodwork students. The items that were adapted was structured based on likert five response options of Strongly Agree (SD), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD). The response options were assigned values as follows: Strongly Agree (SD)= 5, Agree (A)= 4, Undecided (UD)= 3, Disagree (D)= 2, Strongly Disagree (SD)= 1. The instrument for data collection was face validated by three experts, one from the Department of Industrial Technical Education, University of Nigeria Nsukka (UNN), one from Michael Okpara University of Agriculture Umudike (MOUAU) and another one from Nnamdi Azikiwe University, Akwa (UNIZIK). Their comments, suggestions and advice were used to modify some of the items in the questionnaire. The researchers administered the copies of the questionnaire with the help of three research assistants. Pearson product moment correlations were employed in the research questions for the data analysis.

Results

Research Question 1: What is the influence of achievement motivation on the academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities?

Table 1: Pearson Product Moment Correlation on Influence of Achievement Motivation on the Academic Performance of Automobile/metalwork and Building/woodwork Students in Nigerian Universities.

		Achievement Motivation	Academic performance
Achievement motivation	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	150	
Academic performance	Pearson Correlation	0.451**	1
	Sig. (2-tailed)	0.005	
	N	150	150

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

The results presented in Table 1 shows the relationship among achievement motivation and academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities. It can be observed that there is a positive relationship between achievement motivation and academic performance; however the value (0.451) shows that the correlation between the two variables is a strong correlation. The table therefore reveals that the achievement motivation had a positive influence on the academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities.

Research Question 2: What is the influence of parent income on the academic performance of automobile/metalwork and building/woodwork in Nigerian Universities?

Table 2: Pearson Product Moment Correlation on Influence of Parents income on the Academic Performance of Automobile/metalwork and Building/woodwork Students in Nigerian Universities.

		Parents Income	Academic Performance
Parents Income	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	150	
Academic Performance	Pearson Correlation	0.204	1
	Sig. (2-tailed)	0.091	

building/woodwork students in Nigerian Universities. This is in agreement with Alhajraf and Aisha (2017) who investigated students' demographic and academic characteristics that are associated with students' academic performance during their undergraduate studies. They observed that student's demographics are important to their academic performance. The study is also in line with Osakede and Deborah (2017) who investigated the factors that determine entrepreneurial interest and academic performance among the youth population. Equally Zahyah and Farukh (2016) examined the impact of demographic factors on the academic achievement of students. This study also supports Insah and Patrick, (2013), which examined the influence of socio-demographic factors on the entrepreneurial intentions of graduates. They found that socio-demographic factors influence entrepreneurial intentions. Thus this study has shown that socio-demographic variable is important because it influences academic performance and entrepreneurial intentions.

The study also found out that there was a positive relationship between parent's occupation and academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities. These findings are in line with Martinez, (2015) who investigated the relationship between final year engineering students' achievement motivation and their academic performance. The study is also similar to Francois and Juan, (2017) who examined the relationship between entrepreneurial motivation and entrepreneurial intention among biological science students.

Conclusion

The students of automobile/metalwork and building/woodwork in Nigerian universities are expected to perform better in their academic activities and also acquire relevant knowledge and skills to embark on paid or self employment after graduation. But literature and researchers discovered that students do not have good academic performance in the courses they are offering to due family related issues. Also, the students on graduation hardly embark on self employment or relevant entrepreneurial activities. This study was then carried out in order to generate data to justify acclaimed situation among these students in the universities in south-eastern states of Nigeria. The study therefore determined the relationship among achievement motivation and family background on the academic performance of automobile/metalwork and building/woodwork students in Nigerian Universities. Family background and achievement motivation therefore had a positive relationship with academic performance of the students in Nigerian Universities.

Recommendations

Based on the findings made and the conclusion drawn, the following recommendations were made:

1. Automobile/metalwork and building/woodwork lecturers should be trained through workshops and seminars on how achievement motivation can be used to influence the performance and entrepreneurial intentions of students positively.
2. Students of automobile/metalwork and building/woodwork technology should be advised or educated to take further steps in seeking for achievement motivation and consider their family backgrounds in their study.
3. Entrepreneurial seminars should be organized for the graduating students. This should be done immediately after they conclude their final year examination. The idea is to help them defeat fear and to enlighten them on the benefits of practicing what they had studied instead of moving on to jobs and occupation.
4. The findings of the study should be implemented by government and other enabling bodies
5. Government and individuals with enabling abilities should sponsor a research that will lead to development of achievement motivation package to train lecturers of automobile/metalwork and building/woodwork technology.

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