# Influence of Demographic Variables on Academic Performance and Entrepreneurial Intentions of Electro-Mechanical Technology Students of Nigerian Universities

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***Abstract:*** **The study investigated the influence of demographic variables on the academic performance and entrepreneurial intentions of electro-mechanical technology students in Nigerian Universities. Three research questions were answered while the three hypotheses formulated were tested at 0.05 level of significance. The study adopted a correlational research design and was carried out in South Eastern States of Nigeria. The population for the study was 250 students of electro-mechanical technology. There was no sampling because of manageable size of the population. The instrument for data collection was questionnaire titled influence of Demographic Variable on Performance and Entrepreneurial Intention (IDVPEIQ). Three experts face- validated the instrument and the internal consistency of the questionnaire items was determined using Cronbach alpha reliability method; the overall reliability coefficient of 0.84 was obtained for questionnaire items. Pearson product moment correlation method, Point –biserial correlation, multiple regression and hayes process macro (model 1) were used to analyse data for answering research questions and testing the hypotheses. The findings of the study revealed that: (i) socio-demographic variable have a positive influence on academic performance of electro-mechanical technology students (ii) socio-demographic variables have a negative influence on entrepreneurial intentions of electro-mechanical technology students (iii) academic performance have a positive relationship with entrepreneurial intentions of electro-mechanical technology students. The findings on hypotheses revealed that (i) there was a significant relationship between academic performance and entrepreneurial intentions of electro-mechanical technology students (ii) there was a significant relationship between socio-demographic variables and academic performance of electro-mechanical students. Recommendations include that government, school administrators and teachers should take necessary steps to make sure entrepreneurial intentions and academic performance of students get improved.**

***Keywords*****: entrepreneurship, academic performance, influence, electro-mechanical students, entrepreneurial intention**

## I. INTRODUCTION

Universities are established to train individual students for paid or self employment after graduation. Nigerian universities are charged to teach, carry out community service and to conduct research (Ogbuanya & Bakare, 2016) in which the findings could be used to solve societal problems. Universities, as important sources of knowledge, technology and skilled human capital, can provide valuable ideas and support to new industries and are engaged in innovation and entrepreneurship dynamics through third mission activities (Ranga, Temel, Murat Ar, Yesilay & Sukan, 2016). There are many training programmes in the universities where students can acquire knowledge and skills; one of such training programmes is called electro-mechanical technology (electrical/electronic and mechanical technology).

Electro-mechanical technology (Electrical/electronic and mechanical Technology) is an integration of two different areas of specialization in industrial technical education. Electrical/electronic technology is an area of specialization in Technical Education designed to give full training to students interested in the installation and maintenance of electrical and electronic systems found in residential, commercial and industrial areas (Galvestone College, 2015; Chukwuedo, 2017). Electrical/Electronic Technology programme also provides the fundamental knowledge necessary for a life-long career in the dynamic and accessible areas of electrical and electronic technology (Caribbean Examination Council, 2005). The students of electrical/electronic technology are expected to acquire knowledge and skills to design, develop, construct and install electrical and electronic gadgets and appliances before graduation. Electrical /electronic students offer many general and specific courses with mechanical technology students. Mechanical technology programme comprises automobile and metalwork contents. For example, metalwork technology equips students with skills, knowledge and attitudes or competence in welding and fabrication, foundry, forging, Casting, riveting and machine shop practice (Olawepo, 2018) while automobile technology is a training programme for equipping students with competence and techniques to troubleshoot, repair and service faulty mechanical objects such as vehicles, and parts of electro-mechanical machines.

The contents of electro-mechanical technology are developed in a way that anyone who passes through them will develop technical and entrepreneurial skills for employment. Due to the nature and well developed entrepreneurial contents of both electrical/electronic and mechanical technology programmes, they have tendency of equipping students with entrepreneurial skills and education; as these can boost their entrepreneurial intention. Entrepreneurial intention (EI) is an important step in the entrepreneurship process, the most immediate/important antecedent of behavior and a strong predictor of entrepreneurial activity. Gulruh (2010) defined EI as one's willingness in undertaking entrepreneurial activity, or become self employed which often involves inner guts, ambition and the feeling to stand on one's feet. Generally, entrepreneurial intentions are a state of mind which directs and guides the actions of the individual towards the development and implementation of new business concepts with the plan of an individual creating a new venture within the technological field (Grundsten, 2004). Entrepreneurial intention is said to be a reliable predictor or measure of entrepreneurial behaviour and entrepreneurial activity (Krueger, 2003). Improvement in academic performance of students is also expected in electrical/electronic and mechanical training programmes

The concept of academic performance has become a source of concern especially in the wake of the declining standards of education. The decline in students' academic performance and low intentions to become entrepreneurs is largely attributed to the many school and non-school related demands and responsibilities (Ukpong, 2015). Academic performance according to Egbule (2004), is the level of achievement in a particular field of study where higher scores indicate better educational understanding. Annie (2006) viewed academic performance as 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. It can also be defined as students' reporting of past semester CGPA/GPA and their expected GPA for the current semester. Influence of demographic variables can also be used in a research concerning electro-mechanical technology students. Socio-demographic variables are used for analyses in the social sciences, marketing and medical studies research. Socio-demographic variables are certain characteristics of human populations and population segments, especially when used to identify consumer markets (Lucia, 2013). Demographic information provides data regarding research participants and is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population for generalization purposes. Usually demographics or research participant characteristics are reported in the methods section of the research report and serve as independent variables in the research design (Neil, 2010). Socio-demographic variables also provide an overview of available survey instruments or address the measurement of characteristics. Demographic variables such as gender, family background, experience/year of study, parent occupation, marital status among other according to Kanife (2021) can influence students' academic performance and entrepreneurial intentions of electro-mechanical students.

The essence of including electro-mechanical technology programme into university curriculum is to equip students with relevant knowledge, skills and attitudes to engage in paid and self employments. It is therefore assumed that electro-mechanical technology students will have better entrepreneurial intentions for entrepreneurial activities and better academic performance so that they can graduate on time and engage themselves in self employment; but the situation on ground now is far from the objective of electro-mechanical technology in Nigerian universities. The students received training in electro-mechanical technology in Nigerian universities but on graduation find it very difficult to embark on entrepreneurial activities while some will not even graduate at the expected time or duration because of poor academic performance. That is, there is poor academic performance among electro-mechanical technology students and majority of students do not have good intentions to create entrepreneurial activities after graduation and variables that can improve this situation are needed. In the study area, there is little or no statistical data and evidence to show the relationship among the variables and moderating influence of socio-demographic variables on the achievement motivation and entrepreneurial intentions of electro-mechanical students in Nigerian Universities. It is therefore necessary to conduct this study to fill the gaps created and to provide empirical data that can support the reality on ground.

*Relationship among Socio-demographic Variables, Entrepreneurial Intentions and Academic Performance of Electro-mechanical Technology Students*

Numerous studies have grouped the socio-demographic factors that influence entrepreneurial interest among electro-mechanical students into categories of push and pull factors. Moa-Liberty & Tunde (2016), for instance, showed that, push factors such as unemployment, poverty and job security were predominant determinants of students' engagement in various forms of entrepreneurship. In a related study, Alhajraf & Aishah. (2017) showed that students were more pulled rather than pushed into entrepreneurship. In other words, students were interested in entrepreneurship mainly as a result of positive factors such as the opportunity to make use of creative talents, independence and prospects for higher earnings than through negative factors such as high prevalence of unemployment. It's been observed that entrepreneurship considerations are not actualised as a desired career choice basically due to lack of funding, business skills, existence of many competitors and fear of failure (Sarwar & Sarwar, 2012). It was observed that socio- demographic factors have an encouraging or impeding effect on the intention of individuals for entrepreneurial career in some vocational subjects/works. Family background, parental education, work experience, age, gender and the norms/values

of a society influence the choice of individual's life careers, that is, entrepreneurship or salaried employment (Siraw, 2014). In terms of gender, findings for participation in entrepreneurship are non-uniform. There is no consensus on whether males have higher tendency to engage in entrepreneurial activities than females and vice versa (Aysa & Abdul, 2014). There are, however, evidence that the student's course of study influences the extent of entrepreneurial participation. It is showed that electro-mechanical technology students have the highest risk taking scores in entrepreneurship, followed by business and arts students. The entrepreneurial intention of students exposed to entrepreneurial courses is significant (Isaac & Charles, 2016).

In examining entrepreneurship, there are scarcities of findings on entrepreneurial engagement and academic performance. It is evident that studies have commonly focused on the determinants of entrepreneurial intention among students with less attention on factors that influence engagement in entrepreneurship and whether there are interferences with academic performance (Osakede, 2015). From an educational perspective, understanding students' academic and career choice intentions (e.g., entrepreneurial intention) would help educators tailor their curriculum designs to meet students' unique academic demands and future career preparation (Kenneth & Michael, 2013).. For example, by understanding students' entrepreneurial intentions, technical educators could provide special mentoring programmes for those who have strong entrepreneurial intentions and help them understand better the business implications of technology, such as, business opportunities and risks. Technical educators could also develop better curriculum that integrates students' technology skill development into their future business practices. In addition, with knowledge of entrepreneurship, electro-mechanical technology students can understand better how IT creates business value and can motivate themselves to transform technology innovation into market opportunity (Adam, 2014).. Electro-mechanical technology has a capacity to generate and disseminate knowledge and display sources of alternative career choices and broadens the horizon of individuals in fulfilling economic and social needs thereby applying the skills acquired in its unique and valuable sense. Electro-mechanical technology is a course that creates a supportive environment which has a good chance of getting students internalize positive entrepreneurial values.

Research has shown that over the year, academic performance has been affected by some socio-demographic such as age, gender, level of education, family background among others. Guney (2009) conducted studies about the link between the students age and students academic performance. They found that mature students achieve higher grades than youthful students do. This result demonstrates a positive relationship between students' age and their GPA. However, this is inconsistent with some other studies which reveal that grades earned by younger students are higher than mature students (Eamon, 2005). Entrepreneurial intentions are associated with socio-demographic variables such as age, gender, education background, prior employment experience, level of education and the role models. Socio-demographic factors such as age and gender have been proposed to have an impact on entrepreneurial intention (Kristiansen and Indarti, 2004). In general, women have been reported as having lower entrepreneurial intentions. Pruett & Shinnar (2009) confirmed that men are more likely than women to express an intention or preference for starting their own businesses. Paul-Francois 2016) claimed that demographic measures are typically used to identify key respondents' characteristics that might influence their opinions and/or are correlated with their behaviours and experiences. Demographic measures include age, types of school, gender level of academic study, race and educational attainment among others. Demographic profiles in this study are age, level of academic study, gender, age, class of parent which electro-mechanical technology students belong and which may affect or influence their academic performance and entrepreneurial intentions.

*Purpose of the Study*

The general purpose of study was to investigate the influence of demographic variables on the academic performance and entrepreneurial intentions of electro-mechanical students in Nigerian Universities. In order to achieve this purpose, the study provided answers to these research questions:

1. What is the influence of socio-demographic variables on the academic performance of electro-mechanical students in Nigerian Universities?
2. What is the influence of socio-demographic variables on the entrepreneurial intentions of electro-mechanical students in Nigerian Universities?
3. What is the relationship between academic performance and entrepreneurial intentions of electro-mechanical students in Nigerian Universities?

*Hypotheses*

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between the academic performance and entrepreneurial intentions of electro-mechanical technology students
2. There is no significant relationship between the socio-demographic variables and academic performance of electro-mechanical students in Nigerian Universities.
3. Socio-demographic variables moderate the effect of achievement motivation on the academic performance of electro-mechanical students in Nigerian Universities

## II. METHODOLOGY

The study adopted correlational survey research design. According to Ary, Jacobs, & Raazavieh (2005),

correlational research is a research design used to establish relationship between variables without a manipulation of the variables. Correlational design was found appropriate for this study because, it enables the researcher to measure the variables independently and examine 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. The study was carried out in the south eastern part of Nigeria because there are reasonable numbers of the universities that offer electro-mechanical technology courses with students that can be involved in the study.

The population for the study was 242 electrical/electronic and mechanical technology students in five government owned Universities in the South Eastern, Nigeria. These Universities are also known as 1st and 2nd generation institutions: 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 the five Universities as at 2019/2020 session. The entire population of electro-mechanical students was studied due to manageable size. Therefore, no sampling was carried out. The instrument for data collection was the questionnaire titled: Moderating influence of Demographic Variables on Performance and Entrepreneurial Intention (MIDVPEIQ). The questionnaire was made up of two sections; Section A consists of demographic information such as: age, gender, level of academic study, field of study, marital status and parental occupation while section B consisted of 41 items to measure entrepreneurial intention of electro-mechanical students. These 41 items of entrepreneurial intention questionnaire were adapted from entrepreneurial intentions questionnaire by Liñán (2004) while some items were adopted completely from Francisco (Liñán & Chen, 2009). The questionnaire was structured on five point scale as Strongly Agree (SA) -5 points, Agree (A) -4, Unsure (U) -3, Disagree (D) -2, and Strongly Disagree (SD) - 1 point. Students' scores in their various semesters were also used as their academic performance scores.

The MIDVPEIQ was face validated by three experts in the Department of Industrial Technical Education, University of Nigeria, Nsukka. The experts were requested to look at the research instrument, check whether the items addressed academic performance and entrepreneurial intentions and make their inputs as well as suggestions on how the instrument can be improved to elicit the desired information. A total of forty six items were sent for validation and after proper review forty five items were retrieved. Their comments, suggestions and advice were used to modify some of the items in the questionnaire. The reliability of the instrument was established using Cronbach alpha reliability method and electro-mechanical technology students at University of Benin were involved in the study. The choice of the university was appropriate because the students have been properly trained like other students involved in the study to become electro-mechanical technology graduates which are academically sound and are prospective entrepreneur within the field of study. Also the institution has students from other parts of Nigeria. The reliability coefficient of 0.84 was obtained for items on entrepreneurial intentions of electro-mechanical students while the overall reliability coefficient was 0.88.

The researchers administered the copies of the questionnaire with the help of three research assistants. The research assistants were hired, briefed on the objectives of the study and were required to distribute and also retrieve the copies of the questionnaire from the respondents. The researcher and research assistants ensured appropriate administration, safe handling, quicker attendants to the respondents and higher return rate of response. The distribution and retrieval of the instrument were scheduled for one week but it however took three weeks. Out of 250 copies of the questionnaire administered, 242 copies were retrieved back representing 96.4 percent return rate. The statistical methods used in the study include: Pearson product moment correlation, regression analysis and F. Haye's PROCESS Macro v.3.4. Pearson product moment correlation was used to analyze data for answering research questions while regression analysis was conducted using SPSS version 22 and moderation analysis was conducted using F. Haye's PROCESS Macro v.3.4 for testing all the hypotheses formulated for the study.

| SN | Range of values of correlation coefficient (r) | Interpretation |
|---|---|---|
| 1 | ± 0.00 to 0.19 | Very weak relationship |
| 2 | ± 0.20 to 0.39 | Weak relationship |
| 3 | ± 0.40 to 0.59 | Moderate relationship |
| 4 | ± 0.60 to 0.79 | Strong relationship |
| 5 | ± 0.80 to 1.00 | Very strong relationship |

## III. RESULTS AND INTERPRETATION

Table 1: Pearson Product Moment Correlation on Influence of Socio-Demographic Variables on the Academic Performance of Electro-mechanical Technology Students in Nigerian Universities

| | | Socio-demographic variables | Academic performance |
|---|---|---|---|
| Socio-demographic variables | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | |
| | N | 242 | |
| Academic performance | Pearson Correlation | .451** | 1 |
| | Sig. (2-tailed) | .005 | |
| | N | 242 | 242 |

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

The results presented in Table 1 shows the relationship between socio-demographic variables and academic performance of electro-mechanical technology students in Nigerian Universities. It can be observed that a positive relationship exists between socio-demographic variables and academic performance, however the value (.451) shows that the correlation between the two variables is moderate. This can be interpreted to mean that socio-demographic variables had a positive influence on the academic performance of electro-mechanical technology students in Nigerian Universities.

Table 2: Pearson Product Moment Correlation on Influence of Socio-Demographic Variables on the Entrepreneurial Intentions of Electro-mechanical Technology Students in Nigerian Universities

| | | Socio-demographic variables | Entrepreneurial intentions |
|---|---|---|---|
| Socio-demographic variables | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | |
| | N | 242 | |
| Entrepreneurial intentions | Pearson Correlation | -.204 | 1 |
| | Sig. (2-tailed) | .091 | |
| | N | 242 | 242 |

The results in Table 2 shows the relationship between socio-demographic variables and entrepreneurial intentions of electro-mechanical technology students in Nigerian Universities. It can be observed that a negative relationship exists between socio-demographic variables and entrepreneurial intentions, however the value (-.204) shows that the correlation between the two variables is a weak correlation. The table, therefore reveals that the socio-demographic variables had a negative influence on the entrepreneurial intentions of electro-mechanical technology students in Nigerian Universities. This implies that when the value of one variable increases, the value of the other variable tends to decrease.

Table 3: Pearson Product Moment Correlation of academic performance and entrepreneurial intentions of Electro-mechanical Technology Students in Nigerian Universities

| | | Entrepreneurial intentions | Academic performance |
|---|---|---|---|
| Entrepreneurial intentions | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | |
| | N | 242 | |
| Academic performance | Pearson Correlation | .538** | 1 |
| | Sig. (2-tailed) | .010 | |
| | N | 242 | 242 |

The results presented in Table 3 shows the relationship among entrepreneurial intentions and academic performance of electro-mechanical technology students in Nigerian Universities. It can be observed that there was a positive relationship between entrepreneurial intentions and academic performance, however the value (.538) shows that the correlation between the two variables is a moderate correlation. The table, therefore reveals that entrepreneurial intentions had a positive influence on the academic performance of electro-mechanical technology students in Nigerian Universities. This implies that when the value of one variable increases, the value of the other variable also tends to increase.

*Hypothesis 1*

There is no significant relationship between the academic performance and entrepreneurial intentions of electro-mechanical technology students

Table 4: Model Summary of Regression Analysis between Academic Performance and Entrepreneurial Intentions of Electro-mechanical Technology Students

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .143[a] | .089 | .084 | 4.49961 |
| a. Predictors: (Constant), entrepreneurial intentions | | | | |

The above Table 4 highlights the model summary of Regression analysis between academic performance and entrepreneurial intentions of students. It shows the value of correlation coefficient that is R and coefficient of determination that is $R^2$. The value of R represents the simple Pearson's correlation. The value of coefficient of determination ($R^2$) indicates how much of the variation in the dependent variable (entrepreneurial intentions) can be explained by the independent variable (academic performance). The table shows that the value of R is .143 and this indicates that there is a low degree of relationship between academic performance and entrepreneurial intentions. While the value of $R^2$ is .089 which means that 8.9% variation in entrepreneurial intentions is explained by academic performance.

Table 5: Simple Linear Regression: Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 24.879 | 9.631 | | 25.426 | .000 |
| | academic performance | .091 | .052 | .143 | 14.076 | .000 |
| a. Dependent Variable: entrepreneurial intentions | | | | | | |

The coefficient Table 5 provides details of models parameters (Beta values) and significance of these values. The unstandardized Beta coefficient gives measures of the contribution of each variable to the model. It is clear from Table 5 that the value of unstandardized Beta is .091 which represents the gradient of regression line. Therefore, if the

value of predictor variable (academic performance) is increased by one unit, there is .091 unit increased in the dependent variable (entrepreneurial intentions). The value of unstandardized Beta also indicates that there is a moderate and positive influence of academic performance on entrepreneurial intentions. This impact is statistically significant because sig. value (p) is .000 which is less than .05 (95% confidence interval). Therefore, the null hypothesis is rejected. It may be concluded that there was a significant relationship between the academic performance and entrepreneurial intentions of electro-mechanical students

*Hypothesis 2*

There is no significant relationship between the socio-demographic variables and academic performance of electro-mechanical technology students.

Table 6: Model Summary of Regression Analysis between Socio-Demographic Variables and Academic Performance of Electro-mechanical Technology Students

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .451[a] | .240 | .231 | 4.46553 |
| a. Predictors: (Constant), academic performance | | | | |

The above table 6 highlights the model summary of Regression analysis between socio-demographic variables and academic performance. It shows the value of correlation coefficient that is R and coefficient of determination that is $R^2$. The value of R represents the simple Pearson's correlation. The value of coefficient of determination ($R^2$) indicates how much of the variation in the dependent variable (academic performance) can be explained by the independent variable (socio-demographic variables). The table shows that the value of R is .451 this indicates that there is a moderate degree of relationship between socio-demographic variables and academic performance of electro-mechanical technology students. While the value of $R^2$is .240 which means that 24.0% variation in academic performance is explained by socio-demographic variables.

Table 7: Simple Linear Regression: Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 91.308 | 2.705 | | 33.761 | .000 |
| | socio-demographic variables | .334 | .014 | .451 | 9.323 | .000 |
| a. Dependent variable: academic performance | | | | | | |

The coefficient Table 7 provides details of models parameters (Beta values) and significance of these values. The unstandardized Beta coefficient gives measures of the contribution of each variable to the model. It is clear from table 10 that the value of unstandardized Beta is .634 which represents the gradient of regression line. Therefore, if the value of predictor variable (socio-demographic variables) is increased by one unit, there is .334 unit increased in the dependent variable (academic performance). The value of unstandardized Beta also indicates that there is a moderate and positive influence of academic performance on entrepreneurial intentions. This impact is statistically significant because sig. value (p) is .000 which is less than .05 (95% confidence interval). Therefore, the null hypothesis is rejected. It may be concluded that there was a significant relationship between the socio-demographic variables and academic performance of electro-mechanical technology students

*Hypothesis 3*

Socio-demographic variables moderate the effect of achievement motivation on the academic performance of electro-mechanical technology students

Table 8: Results on how Socio-demographic Variables Moderate the Effect of Achievement Motivation on the Academic Performance of Electro-mechanical students

| **Model** | **coeff** | **se** | **t** | **p** | **LLCI** | **ULCI** |
|---|---|---|---|---|---|---|
| constant | 16.7137 | 2.2386 | 7.4661 | .0000 | 12.2642 | 21.1632 |
| Academic p | -.4233 | 1.3491 | -.3138 | .0244 | -3.1049 | 2.2582 |
| Social demo | 2.7945 | .2294 | 12.1830 | .0000 | 2.3386 | 3.2504 |
| Int_1 | -1.3224 | .1339 | -10.3968 | .0000 | -1.6588 | -1.1264 |

The moderation effect was tested using Hayes PROCESS macro (Model 1). Table 8 shows the interaction term was statistically significant (b = -1.322; SE= .1339; p = .000) in the model, indicating that social demographic variables were a significant moderators of the effect of achievement motivation on academic performance. The effect of achievement motivation on social demographic variables was negative and significant (b = -.4233, SE = 1.3491, p = .0244), conditional on social demographic variables= 0; the conditional effect of social demographic variables was positive and significant (b = 2.7945, SE = .2294, p < .001).

## IV. DISCUSSION OF FINDINGS

The findings of the study reveal that a moderate positive relationship exists between socio-demographic variables and academic performance of electro-mechanical technology students in Nigerian Universities. This finding is in agreement with Alhajrafand (2017) who investigated students' demographic and academic characteristics that are associated with students' academic performance during their undergraduate studies. Their findings therefore revealed that students' demographic variables influence their academic performance. The findings of this study also agreed with the findings of Osakede (2015) that demographic variables have relationship with academic performance of youths in schools and colleges.

The finding of Zahyah and Farukh (2016) also supports the finding of this study that significant positive relationship exist between demographic variables (age, gender, mother's education, location, parent's income) and academic achievement of students. Insah, 2013 found out that increase (decrease) in age of male will decrease (increase) academic performance by that margin more than their female counterparts. Farooq & Chaudhry (2011) also established that students' age had a significant effect on the student's academic performance

The study also found a weak negative relationship between demographic variables and entrepreneurial intentions of electro-mechanical technology students and this finding agreed with the finding of Moa-Liberty and Tunde (2016) that socio-demographic factors influence entrepreneurial intentions of graduates. Several studies revealed that demographic variables have a great influence on entrepreneurial intention of individual persons or students (Kanife, 2021; Insah, 2013; Achchuthan and Nimalathasan, 2013).

The study established that a moderate positive relationship exists between academic performance and entrepreneurial intentions of electro-mechanical students in Nigerian universities. This finding disagreed with the finding of Osakede & Deborah (2017) that engagement in entrepreneurial activity and/or entrepreneurial intention has no significant effect on students' academic performance. The findings of the study agreed with the findings of Tumbal (2019); Onete & Edet (2012) that academic performance of students has strong relationship with their attitudes to create entrepreneurial activities; this simply means that relationship exists between academic performance and entrepreneurial intentions of students. The findings of this study also agreed with the finding of Kanife (2021) that a relationship exists between academic performance and entrepreneurial intention of students. The findings on hypotheses indicated that there is a significant relationship between academic performance and entrepreneurial intentions, there is a significant relationship between demographic variables and academic performance of electro-mechanical technology students. Finally on hypothesis, social demographic variables are significant moderators of the effect of achievement motivation on academic performance, however there is a paucity of literature on the hypotheses

## V. CONCLUSION

The electro-mechanical students 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 researcher discovered that students do not have good academic performance in the courses they are offering and automobile/metalwork 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 electro-mechanical technology students in the universities in south eastern states of Nigeria. The study therefore investigated the influence of socio-demographic variables on the academic performance and entrepreneurial intentions of electro-mechanical technology students in Nigerian Universities. It can be concluded that a moderate positive relationship exists between socio-demographic variables and academic performance, a weak negative relationship also exists between socio-demographic variables and entrepreneurial intentions, however the value (-.204) shows that the correlation between the two variables is a weak correlation and finally a moderate positive relationship exist between entrepreneurial intentions and academic performance

## VI. RECOMMENDATIONS

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

1. Electro-mechanical technology 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. Electro-mechanical technology students should be advised or educated to take further steps in seeking for achievement motivation and consider their family backgrounds in their study.
3. The findings of the study should be implemented by government and other enabling bodies
4. Government and individuals with enabling abilities should sponsor a research that will lead to development of achievement motivation package to train lecturers of electrical/electronic technology and automobile/metalwork

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