



SIWES AND PARENTS' OCCUPATION AS DETERMINANTS OF COMPUTER EDUCATION STUDENTS' ENTREPRENEURIAL INTENTIONS IN HARDWARE MAINTENANCE ENTERPRISE IN SELECTED UNIVERSITIES IN SOUTH EASTERN NIGERIA

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Abstract

The study investigated SIWES and parents' occupation as determinants of Computer Education students' entrepreneurial intentions in hardware maintenance enterprises in South Eastern Nigerian universities. In carrying out the research, two research questions were posed, while two null hypotheses were formulated for the study. The population for the study was 96 subjects consisting of 16 final year students of University of Nigeria Nsukka, 29 final year students of Nnamdi Azikiwe University Awka and 51 final year students of Michael Okpara University of Agriculture, Umudike. Data were collected through a validated questionnaire and analyzed using correlation statistics. The reliability of the instrument was established using Cronbach alpha yielding reliability coefficient of 0.829. Findings showed that parents' occupation had a significant relationship with students' entrepreneurial intentions, while SIWES had no significant relationship. The study recommended that students should engage in small computer maintenance businesses while in school to develop entrepreneurial interest and skills.

Keywords: SIWES, Parents' Occupation, Computer Education, Entrepreneurial Intentions, Hardware Maintenance Enterprise

Introduction

It is said that there is dignity in every honest labour, therefore when someone lays his/her hands on anything worthwhile that could enable them to make money and earn a living from the trade such a person has entrepreneurial abilities. Entrepreneurship concerns the ability and willingness to take risks and to combine factors of production in order to produce goods and services that can satisfy human wants and create wealth (Sharma, 2021). Entrepreneurship is the process of wealth creation through the creation of value rather than its manipulation (Kraus, Palmer, Kailer, Kallinger & Spitzer, 2019). It involves the destruction

of existing market structures by the creation of new markets (or reduction in market shares of current leaders) through improvement of existing products or the development of entirely new products (Tidd & Bessant, 2020). Chukwurah and Atah, (2019), sees entrepreneurship as the process of putting together creative and innovative ideas and putting these with management and organization skills in order to combine man, money, machineries and other resources to meet an identified need and thereby create wealth. It is the introduction of new business activities into economy to improve the standard of living of the people and make new profit.

The forgoing clearly revealed that for an individual to undertake entrepreneurship opportunities one must have developed entrepreneurial intentions. Entrepreneurial intention is defined as the willingness to start one's own business and to become self-reliant (Mamman, 2019). It is generally formed by an individual's approach toward entrepreneurship and the leading social norms attached to entrepreneurship in the future (Boldureanu, Ionescu, Bercu, Bedrule-Grigoruță & Boldureanu, 2020). An entrepreneurial intention is typically considered to be formed by a person's attitude toward entrepreneurship and the prevailing social norms attached to entrepreneurship in the future (Vamvaka, Stoforos, Palaskas, & Botsaris, 2020). O'Gorman (2019) defined entrepreneurial intention as a decision to form a new business venture that is planned rather than being conditioned. An individual may have the potential of being entrepreneur because of own competency and self-efficacy but may not make the transition into entrepreneurship because of a lack of intention. Alam, Kousar and Rehman, (2019) argued that entrepreneurial intention refers to creating a new firm or a new value driver within existing organizations. Ghimire & Neupane, (2020) argued that entrepreneurial intention is of two types: impulsive and deliberate intentions. Impulsive entrepreneurial intention refers to intention without realistic control of business resources. Entrepreneurship intentions therefore can be said to be driving force or motivation behind starting up a business or an enterprise with the mindset of making profit and making himself/herself better in the society.

Entrepreneurial intentions can be influenced by personal characteristics, culture or demographic factors; while deliberate entrepreneurial intention is the willingness of the individual to venture into business due to the feasibility of entrepreneurial behaviors. It depends on external resources such as prior experience or network building. Although it has also been argued that certain demographic factors influences the entrepreneurial intention of an individual.

Many graduates of computer education are unemployed in developing countries especially Nigeria. Graduates of computer education are supposed to be employed or create their own jobs after schooling, instead of finding themselves in the mix of unemployed youths in the society. Vocational and Technical Education institution Impart entrepreneurial skill to

students in Technical Education (TE). Technical and Vocational Education is established to provide knowledge and skills in different subject areas such as Computer and Robotics Education, Agric Education, Business Education, Industrial and Technical Education, Entrepreneurship Education, among others. These subject areas consist of different trade areas which are capable of offering job opportunities to graduates. Here in this work our emphasis is on computer education. However, computer education in this study is one of the courses of study offered in tertiary institutions in Nigeria. Computer Education is a type of education designed to impart the necessary knowledge and skills in various computer-based trade areas (Shahid, Aleem, Islam, Iqbal & Yousaf, 2019). Computer Education according to Smith (2013) is the art of acquiring the basic computer knowledge, ideas, skills and other competencies so as to understand the basic terminologies, weakness of computers, potentialities of computers and how computers can be used to solve everyday problems. The author further stated that computer education is necessary because students will continue to use computer technology in their academic and professional lives.

Computer education means gaining basic knowledge and skills to operate computers in order to perform desired jobs. Computer education does not only involve base knowledge about computer. Computer education improves research, efficient use of technology, career aspirations, enhances creativity: improves performance, etc. (Lin, & Chen, 2012). Computer education has become essential qualification for almost all types of jobs. Since computers ensure effective, time saving and accurate results of jobs it is being widely used in organizations and personal use alike (Lee & Yoon, 2021). Computer education is a training discipline that encompasses the process of acquiring knowledge and skills in the application of computer in problem solving and the development of competencies for the transfer of knowledge in the use of computer to learners (Ibezim, 2018). Furthermore, according to Agbo, (2015) Computer education was introduced to bring Nigerians into contact with computer so that Nigerians could use appreciate, understand and apply the knowledge and skills to solve emerging problems. The objectives of Computer Education, according to Psycharis (2018) include: to create in science and its capabilities to involve the students in an intellectually stimulating and satisfying experience of learning and studying to provide a broad and balanced foundation in computer science knowledge and practical skills; to develop in students through an education in computer science knowledge as practical skills; to develop in students through an education in computer science a range of transferable applicable skill. Computer education courses in tertiary institutions can be categorized as follow software development applications: networking and communication robotics; hardware maintenance (Johnson, Becker, Cummins, Estrada, Freeman, & Hall, 2016). Hardware maintenance involves taking care of the computer's physical components, such as its keyboard, hard drive and internal CD or DVD drives (Iorliam, 2015). According to Miloshevich & Selim (2016) cleaning the computer, keeping its fans free from dust, and defragmenting its hard drives regularly are all parts of a computer hardware maintenance

program. Maintaining hardware helps to extend the computer's lifespan. It helps to prevent wear and tear, and keeps the system functioning smoothly. Maintenance may be defined as work that is regularly done to keep a building, machine, equipment an organization or relationship in good working condition. Cabeza, Albert, Belleville, Craik, Duarte, Grady and Rajah, (2018) regards maintenance as work that is done to preserve components so that they fulfill their functions. The authors explain that maintenance involves maximizing equipment reliability and prolonging the system's life span. Maintenance can increase profits in three directions it decreases running costs, increases capability and elongates the system's lifespan. There are mainly two types of maintenance; system maintenance and physical maintenance. System maintenance keeps one's system functioning smoothly by managing hard drives pace, scanning system errors and regularly defragmenting the hard drive (Bhatt, 2019). Vine protection is also important, as some viruses can interfere with computer hardware on the other hand, Physical maintenance is the keeping of computers away from dust and dirt, keeping them clean and avoiding extreme temperature changes to help maintain hardware (Jang, Johnson. Burnell & Heimerl, 2017). Physical maintenance involves the fact that liquids must be kept away from the computer. Solvents (liquid) should never be used to clean a computer, rather, the monitor and keyboard should be wiped regularly with a soft cloth (Kocsis, 2010). This maintenance services has made people self-reliant hence, students who study and master computer hardware maintenance can be able to make a living from it after graduation; hence it is a viable entrepreneurial area. Some social influence could determine the entrepreneurial intentions of computer education students to venture into computer hardware maintenance business or enterprise.

Social influences according to Rickman, (2019), has the capacity to shape individual's behaviours and belief. The tendency towards conformity in the society is so strong that intelligent and self-determined young people can feel the profound influence and peer pressure affects those groups even on them. Such factors that could influence computer education graduates into making entrepreneurial intention include: Students industrial Work Experience Program (SIWES) and Parents Occupation, The phenomena of peer pressure in a more subtle form might cause a change in behavior to meet the expectations of others (Gheorghiu, Delhomme & Felonneau 2015). Another factor that can influence entrepreneurial intentions is the students industrial work experience in an effort to enhance acquisition of practical and applied skills, the industrial training fund (I.T.F) initiated the students industrial work experience scheme (STWES) in 1973 The industrial scheme is aimed at helping students undergoing courses in engineering and technology and other professional courses in acquire the necessary practical knowledge in industry in addition to the theoretical knowledge gained in the classroom. Gheorghiu, Delhomme and Felonneau (2015) asserts that all participating institutions in entrepreneurship training have come to a common decision that the entrepreneurial skills the students are able to acquire during their study process are not enough for a common (labour) market. According to Ogundele, (2022). a skill implies an

ability which can be developed not necessary inborn, and which is manifested in performance not merely in potential. Thus, it is imperative that university graduates must process demonstrable work skills Ogundele, (2022), emphatically stated that it is only with skilled men that materials can be harnessed, manipulated and transformed into products. The author further stressed that SIWES is the period of consistent converting goods and ideal into productive and profitable commercial ventures.

Furthermore, Parents occupation is the first occupation that most children become familiar with. In the past many, children learned the occupation of the parents as their first occupation. A blacksmiths son learns the art of blacksmithing from the father; the same is applicable to an electrician, electronic repairer, bidder, carpentry, among others (Brown, 2021). This means that the occupation of the parents of the students can influence student's career path. Students whose parents have business venture that are yielding money are likely to continue with the parents' business. Others who may not have interest in such business may be compelled by their parents to start up such businesses. Students work orientation can be influenced by their family member's own work experience and emotions as such a computer education student may likely start hardware maintenance business after graduation if any family member of such an individual is into hardware maintenance enterprise.

It has been realized that tertiary institutions produce graduates for whom there is no employment market. Graduates are produced for salaried employment hence the unemployment of Nigerian graduates has become a major national problem. The period between graduation and employment has continued to lengthen and has become a basis of frustration for Nigerian graduates. In the current circumstances, it is asserted that one of the possible options is for these graduates to become entrepreneurs; however, developing sustainable entrepreneurs involves an education process. Koe. Sa'ari, Majid, & Ismail (2012) stated that entrepreneurs can actually be trained hence entrepreneurs are not always born but can be developed. Consequently, Entrepreneurial intention is therefore a major concern for research as it the solution to the problem of unemployment Mahendra, Djatmika, & Hermawan, (2017). This is because markets cannot cater for the passing out graduates with immediate employment; the graduates should carve out their own way and change the market conditions by opting for self-employment: This intention has been considered as the first steps to entrepreneurial development in emerging economies (Arshad, Meirun, Ahmad, Arshad, & Maneerat, 2020).

Based on the forgoing, it therefore becomes necessary to identify the relationship between social factors like students' industrial work experience program and parents' occupation and how they could form part of the entrepreneurial intentions of students in hardware maintenance to improve entrepreneurial delves in this area.

Purpose of the Study

Specifically, the study determined the relationship between:

- Students industrial Work Experience program (SIWES) and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria
- Parents Occupation and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the relationship between Students Industrial Work Experience program (SIWES) and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria?
2. What is the relationship between Parents Occupation and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria?

Research Hypotheses

The following null hypotheses were used to test at 0.05 level of significance.

H₀₁: There is no significant relationship between Students Industrial Work Experience programs (SIWES) and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria.

H₀₃: There is no significant relationship between parent's occupation and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria.

Methods

Summary of the Procedures Used

The study adopted a correlational research design. The study was aimed at investigating SIWES and parents occupation as determinants of computer education students' entrepreneurial intentions in hardware maintenance enterprise in south eastern universities, Nigeria. To achieve the objectives of this study, two research questions and two null hypotheses were formulated. The population for the study is 96 final year (400 level) Computer Education students in federal Universities that offer computer education programme in South Eastern Nigeria. The population comprises 16 students from University of Nigeria, Nsukka (UNN), 29 students from Nnamdi Azikiwe University, Akwa (UNIZIK) and 51 students from Michael Okpara University of Agriculture, Umudike (MOUAAU). Questionnaire was the instrument used for data collection which consists of 56 items

developed from relevant literature. The instrument was validated by three experts from the department of Computer and Robotics Education, Faculty of Vocational and Technical Education, University of Nigeria, Nsukka. Data was collected by the researcher with the help of 3 research assistants. Data collected was analyzed using Pearson product moment correlations. Correlation for research questions 1 to 5 and hypotheses 1 to 5 was tested at 0.005 level of significance.

Results

The data collected were statistically analyzed and presented in tabular forms, according to the research questions and the null hypotheses that guided this study.

Research Question 1

What is the relationship between Students Industrial Work Experience program (SIWES) and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria?

Null Hypothesis 1 (Ho₁)

There is no significant relationship between Students Industrial Work Experience program (SIWES) and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria?

Data for answering Research Question 1 and Hypothesis 1 are presented in Table 1.

Table 1: Pearson Product Moment Correlation of between Students Industrial Work Experience Scheme (SIWES) and Entrepreneurial Intentions of Computer Education Students in Computer Hardware Maintenance in Universities in South-East Nigeria

Var.	SIWES	N	r _{ppmc}	Remark	Sig.	Decision
1 SIWES	-0.122	94	-0.122	Very weak relationship	0.242	NS
2 Entrepreneurial Intentions						

Data in Table 1 show there is a very weak negative relationship ($r_{ppmc} = -0.122$) between SIWES and entrepreneurial intentions. This implies that SIWES is very weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria.

Table 1 also revealed probability value of 0.242 which is higher than the 0.05 level of significance, indicating that there is no significant relationship between Students Industrial Works Experience Scheme (SIWES) and entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria. Therefore, the null hypothesis 1 (Ho₁) is rejected.

Research Question 2

What is the relationship between Parents Occupation and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria?

Null Hypothesis 2 (H₀₂)

There is no significant relationship between Parents Occupation and Computer Education Students' Entrepreneurial Intentions in Hardware Maintenance Enterprise in South Eastern Universities, Nigeria.

Data for answering Research Question 2 and Hypothesis 2 are presented in Table 2.

Table 2: Pearson Product Moment Correlation of between parents' occupation and Entrepreneurial Intentions of Computer Education Students in Computer Hardware Maintenance in Universities in South-East Nigeria

Var.		Parents' Occupation N		r _{ppmc}	Remark	Sig.	Decision
1	Parents' occupation	-.251*	94	-.251*	Weak relationship	.015	S
2	Entrepreneurial Intentions 1						

Table 2 shows that there is a negative weak relationship ($r_{ppmc} = -0.251$) between parents' occupation and entrepreneurial intentions. This implies that parents' occupation is weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria.

Data in Table 2 further revealed the probability value of 0.015 which is less than the 0.05 level of significance, indicating that there is a significant relationship between parents' occupation and entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria. Therefore, the null hypothesis 2 (H₀₂) is not rejected.

Findings of the Study

Below are the emerged findings from the study with regards to the research questions and hypotheses tested

- a. It was found that SIWES is very weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria. There is no significant relationship between Students Industrial Works Experience Scheme (SIWES) and entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria.

- b. There is a negative weak relationship between parents' occupation and entrepreneurial intentions. Parents' occupation is weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria. There is a significant relationship between parents' occupation and entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria.

Discussion of Findings

The findings of the study are discussed based on the clusters of research questions and hypotheses as follows:

Students industrial Work Experience scheme (SIWES) and the entrepreneurial intention

The findings that SIWES is very weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria is in line with Liqiang (2013). The result of his findings indicates that students' IT entrepreneurial intention is determined directly by their expected outcomes, social influence, and self-efficacy. This shows that the SIWES exposure could influence the entrepreneurial intention of computer education students to venture into computer hardware maintenance enterprise.

This finding contradicts the results of studies carried out by Aganbi (2013) and Usman and Tasmin (2015) that SIWES has failed to empower students for job creation, self-employment, and entrepreneurial intention and engagement. The results of the study carried out by Babalola and Tiamiyu (2013) and Audu, Abdulkadir and Kagara (2013) that SIWES failed to proffer a solution to the problem of lack of association between the skills acquired by the students and the twenty-first-century skills required in the industry contradict the findings in this study.

Parents' Occupation and the entrepreneurial intentions

The findings that parents' occupation is weakly negatively related to the entrepreneurial intentions of computer education students in computer hardware maintenance in universities in South-east, Nigeria is in line with Swarupa, et al. (2020). According to Swarupa, et al. (2020), further observed that in Singapore and Australia, students are more likely to commence new ventures upon graduation if their parents are in businesses. Again, Shahzad, et al (2021). Argued that attitudes toward entrepreneurship depend on exogenous factors like demographics, traits, skills, culture, and social and financial support. They emphasized that prior exposure to business is a factor in motivating individual's entrepreneurship intention. Supporting this, Morris & Jang (2021). Stated that price exposure could be in the form of early exposure to a family business, which influences attitudes toward entrepreneurship. The finding is in line with Georgescu and Herman (2020), which found that those who reported a

positive view of their family's business experience perceived starting a business as both desirable and feasible.

Conclusion

The rate of unemployment in the society requires computer education students to develop interest in establishing their own businesses after graduation. Establishment of computer hardware maintenance enterprise by graduates of computer education will help them to be self-employed and create employment opportunities to some people in the society. Computer education students can be motivated to become entrepreneurs by including more entrepreneurship courses in their curriculum and by providing them opportunities that will enable them meet some established entrepreneurs in the society. Establishing computer hardware maintenance enterprise should be embraced by computer education students without so much regards to some variables such as gender, parent's occupation, age, peers influence, SIWES, among others. This is because many successful entrepreneurs did not allow such variables to influence their intentions. Computer hardware maintenance enterprise is among the most important sources of economic growth and development. As such, computer education students should be intentional on how to make a living through computer hardware maintenance enterprise as there is hardly any household, institution or establishment that does not make use of computer system set.

Recommendations

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

1. Computer education students should see their parent's occupation as a means of livelihood which must be evaluated properly before venturing into such an enterprise.
2. The students should be able to see how they can explore a career option in computer hardware maintenance enterprise which will yield better profit than their parents business.
3. The students' ability to explore a business venture related to computer hardware maintenance, will help them to become experts in such business enterprise.

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