



PRACTICAL SKILLS AND ENTREPRENEURIAL INTENTION AMONG PHYSICS GRADUATING STUDENTS' OF UNIVERSITY OF ILORIN

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Abstract

This study investigated the practical skills and entrepreneurial intention among physics graduating students of University of Ilorin. In this study, the level of practical skills acquired by physics students and their entrepreneurial intentions were examined. This study was a descriptive survey type. The population of this study comprised all students from Faculty of Education offering physics in the University of Ilorin, Nigeria. Fifty (50) graduating physics education students were sampled using a simple random sampling technique. A researcher's designed questionnaire with the reliability coefficient of 0.76 was used for data collection while the data collected were analysed with the use of percentage and chi-square at 0.05 level of significance. Findings of this study revealed that majority of graduating physics education students dispensed high level of practical skills and were of moderate level of entrepreneurial intention. It was therefore concluded that practical skills acquired by the students' enhance their entrepreneurial intention.

Introduction

It has become increasingly apparent that entrepreneurship plays a significant role in the economic development of a country (Muhammad&Normalini,2019). Economically, entrepreneurship invigorates markets and promotes job creation through the formation of new businesses. History has shown that economic progress has been advanced by pragmatic people who are entrepreneurial and innovative, able to exploit opportunities and willing to take risks. Hence transforming ideas into opportunities is the crux of entrepreneurship which undoubtedly raises productivity and enhances technology that necessitated its inclusion in Ethiopia and India university education. Socially, entrepreneurship empowers citizens, generates innovation and changes mind-sets (Jose Prabhu, 2020; Uwameiye&Uwameiye, 2006). Fostering entrepreneurship means promoting the competitiveness of a business especially in an increasing globalized world economy. The Federal Government of Nigeria (FGN, 2013) opined that entrepreneurship make



entrepreneurs adaptable to changing situations by promoting self-reliance thereby alleviating the problem of unemployment.

Competency is needed to sharpen the ideas, thoughts and capabilities of entrepreneurs which facilitate good and effective management and improved services. It was stated in National Policy on Education (FGN, 2013) that for functional education to be relevant, practical acquisition of appropriate skills and developments of competencies are required for the individuals to live and contribute to the development of their society. In effect, undergraduates and graduates need competencies to exercise their talents and be able to transform their education into entrepreneurship ventures. In a developing country like Nigeria, the state of unemployment has given rise to increased rural urban migration for job opportunities. Most developing countries have similar economic conditions whereby government is heavily relied upon as the sole provider of the means of production and livelihood. Moreover, youth restiveness, coupled with high incidences of criminality alongside high poverty levels have resulted to declining standard of living (Osuagwu, 2002).

Nigeria is populated with over 190 million people, but about 70 percent of this population are living below the poverty level, government alone is no longer capable of being the sole provider of the means of production and labour. However, economic self-reliance appears to be the only recourse to address these associated problems. Hence, there are increased interests in entrepreneurial careers and opportunities in colleges and universities all over the world (Ogundele & Olayemi, 2004). The study of entrepreneurship has relevance today not only because it helps entrepreneurs better fulfil their personal need but because of economic contributions of the new venture. The G20 youth entrepreneurship summit held in London in 2009 addressed the challenges facing youth entrepreneurship. The summit was reported to be inspiring, stimulating and certainly increased the profile of global youth entrepreneurship agenda on the world stage effectively positioning youth entrepreneurship as a significant means for wealth and job creation for the benefit of communities and economies around the world (Olawolu&Kaegon, 2012).

Entrepreneurship is considered as the process through which entrepreneurs create, nurture and grow enterprises using reasonable degree of initiative, and competencies necessary to transform change into opportunities thereby deriving personal satisfaction, monetary rewards and independence. Entrepreneurial opportunities are means through which the students exercise their talents and be able to convert their educational experiences into productive ventures so as to brace up to the rising unemployment challenges. Entrepreneurship is presently the most effective method of bridging the gap between gown and the town, creating new enterprises and building new products and services to the market (Nwangwu, 2007).



The Nigeria universities have made it mandatory for all students to offer Entrepreneurship Education course known as Graduate Self-Employment which has been in practice since year 2009 to enable students acquire knowledge of entrepreneurship (Jimoh, 2016). University of Ilorin also runs a Graduate Self Employment course for all its third year students to cultivate in them the spirit of entrepreneurship. The aim is for its undergraduates to be empowered to be self-reliant in the face of present economic challenges and free from future unemployment dilemma.

Physics Education and Entrepreneurial Skill

Physics education students of the university of Ilorin offered workshop practice as a course where students put into practice the theories learnt about diode, capacitors, electricity, resistors, series and parallel connections of wire, into construction of electronics projects which enabled them to be self-reliance and productive force after graduation from university. This is to equip the students with necessary skills that will unlock their economic potentials and enable them to participate and benefit from their national economy as well as facilitate the economic development of the nation (Abayomi et al., 2014).

The primary aim was to enhance the production of nationally relevant, globally-competitive and self-reliant graduates, who will be job creators rather than being job seekers. It is gladdening to note that the University of Ilorin was one of the Nigerian universities that instantly took up the challenge of spearheading the revolution in entrepreneurship education (Ogundele et al., 2012). However, the emergence of formal administration in Nigeria through formal education which enabled people to have the opportunity of being employed in the civil service after graduation destroyed self-reliance and entrepreneurial skills of Nigerians as they became permanently dependent on the colonial masters (Uwem, 2012). This has also led to massive unemployment and pursuit of white-collar jobs.

Many researchers (Agommuoh, & Akanwa, 2014; Yemini & Yeheskel 2011; Zapkauet al, 2015; Zhang, et al, 2014) have worked on entrepreneurship education and physics education intentions of different disciplines of university student and those that worked on physics students did not work on the levels of practical skills acquired by physics education students. It has become imperative to investigate the level of practical skills of physics education, level of entrepreneurial intentions of physics education students and impact of physics education skills on the entrepreneurial intentions of graduating physics education students. Therefore, it is necessary to research on the practical skills acquired by graduating physics students on entrepreneurship.



Purpose of the Study

The purpose of the study was to find out the practical skills and entrepreneurial intention among physics graduating students of University of Ilorin. Specifically, the study

1. examine the level of practical skills acquired by graduating physics education students of university of Ilorin
2. to investigate the level of entrepreneurial intentions of graduating physics education students of university of Ilorin
3. find out the impact of practical skills on the entrepreneurial intentions of graduating physics education students.

Research Questions

The following research questions were raised to guide this study.

1. What is the level of practical skills acquired by graduating physics education students of university of Ilorin?
2. What is the level of entrepreneurial intention of graduating physics education students of university of Ilorin?

Research Hypothesis

H₀₁: Practical skills acquired by graduating physics education students does not have significant impact on their entrepreneurial intention.

Method

This study was a descriptive research which utilised the survey type. The population for the study comprised all students from Faculty of Education (consists of nine Departments: Arts, Adult and Primary, Counsellor, Educational Management, Educational Technology, Health Promotion, Human Kinetics, Science, Social Science) in the University of Ilorin, Nigeria. The target population was students from Department of Science Education and sample was drawn from final year physics education students in the Department. Out of 70 students, fifty graduating students (27 male and 23 female) were randomly sampled for the study using a simple random sampling technique. A researcher's developed questionnaire was used for data collection. The instrument was validated by three experts two from the faculty of science and the other from faculty of education, University of Ilorin. The instrument was pilot tested using test-retest method. The scores obtained from the pilot test were correlated using Pearson's product-moment correlation coefficient and the reliability coefficient of 0.76 was obtained for the instrument. The data collected for the study were presented in Tables and figure while the hypothesis was tested using chi-square at 0.05 of significant.



Results

Table 1. *Demographic Data of the Respondents*

Gender	Frequency	Percentage
Male	27	54.0
Female	23	46.0
Total	50	100.0

Table 1 was represented in figure 1

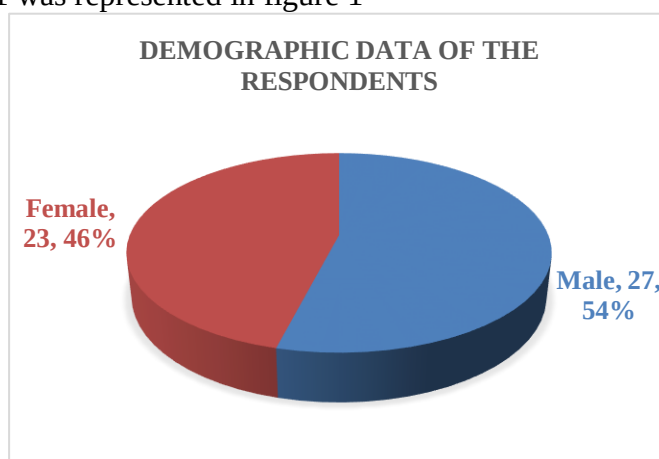


Figure 1. Demographic Data of the Respondents

As shown in Figure 1, out of 50 graduating physics students sampled for this study, 27 (54%) were males while 23 (46%) were females.

Answering of Research Questions

Descriptive statistics of percentage was used to answer the research questions.

RQ₁: Given that there were 10 items on practical skills acquired by graduating physics structured in a four-response-type, the minimum, maximum and range score were 10, 40 and 30 respectively. The range score was therefore divided by 3-level ($30/3=10$). Graduating physics students whose score fell within score range of 10 – 20; 21 – 30 and 31 – 40 were categorised as low, moderate and high levels of practical skill respectively. The summary statistics were presented in Table 2.



Table 2. *Level of Practical Skills Acquired by Graduating Physics Students of University of Ilorin*

Level of Practical Skills	Score Range	Frequency	Percentage
High	31 – 40	32	64.0
Moderate	21 – 30	12	24.0
Low	10 – 20	6	12.0
Total		50	100.0

As shown in Table 2, 32 (64.0%) of the graduating physics students were of high level of practical skills and 12 (24.0%) had moderate practical skills while 6 (12.0%) of the graduating physics students had low level of practical skills. Thus, the majority of the graduating students had high level of practical skills in University of Ilorin, Nigeria.

RQ₂: Given that there were 12 items on entrepreneurial intention of graduating physics structured in a four-response-type, the minimum, maximum and range score were 12, 48 and 36 respectively. The range score was therefore divided by 3-level ($36/3=12$). Graduating physics students whose score fell within score range of 12 – 24; 25 – 36 and 37 – 48 were categorised as having low, moderate and high levels of entrepreneurial intention respectively. The summary statistics were presented in Table 3.

Table 3. *Level of Practical Skills Acquired by Graduating Physics Students of University of Ilorin*

Entrepreneurial Intention	Score Range	Frequency	Percentage
High	37 – 48	17	34.0
Moderate	25 – 36	22	44.0
Low	12 – 24	11	22.0
Total		50	100.0

Table 3 reveals that out of 50 (100.0%) graduating physics students sampled for this study, 17 (34.0%) of the graduating physics students were of high level of entrepreneurial intention and 22 (44.0%) had moderate entrepreneurial intention while 11 (22.0%) of the graduating physics students had low level of entrepreneurial intention. Thus, the majority of the graduating students had moderate level of entrepreneurial intention in University of Ilorin, Nigeria.



Table 4. *Chi-Square Statistics Showing the Impact of Practical Skills on the Entrepreneurial Intention of Graduating Students of University of Ilorin, Nigeria*

Level of Skills	Practical	Entrepreneurial Intention				df	χ^2 cal	Sig
		Low	Moderate	High	Total			
High	Count	3	15	14	32	4	9.850	0.04
	Expected	7.0	14.1	10.9	32.0			
Moderate	Count	6	4	2	12	4	9.850	0.04
	Expected	2.6	5.3	4.1	12.0			
Low	Count	2	3	1	6	4	9.850	0.04
	Expected	1.3	2.6	2.0	6.0			
	Total	11	22	17	50			

*significance at $p < .05$

As shown in Table 4, the χ^2 -value 9.850 was obtained with a p-value 0.04 when computed at 0.05 level of significance. Since the p-value 0.04 is less than 0.05 level of significance, the null hypothesis is not accepted. This implies that practical skills acquired by graduating physics education students have significant impact on their entrepreneurial intention ($\chi^2 (4) = 9.850$; $p < .05$).

Discussion

Findings from this study revealed that the majority (64.0%) of the graduating physics students were of high level of practical skills in University of Ilorin, Nigeria. Graduating physics students were exposed to practical and hands-on which make them to learn better and the steps taking by their teacher in performing the intended skills to be learned through demonstration. This result is in conformity with the results obtained by Nwineh and Okwelle (2018), who found that students taught using wireman, gained more practical skill in domestic electrical installation than those taught using diagrams of wiring. The result is also consistent with the findings of Boutefnouchet and Laios (2016), Ezeudu and Ezinwanne (2013) and Guy and Lownes-Jackson (2015) who found out in their different studies that students acquired more practical skills than their counterpart who uses diagram for laboratory instructions. On the contrary Fatoki (2010) found that in South Africa, students practical entrepreneurial intention of the graduates is very weak, and that most of the respondents prefer to work for public establishments.

Findings also showed that the majority (44.0%) of the graduating physics students had moderate level of entrepreneurial intention in University of Ilorin, Nigeria. Graduating physics students consider entrepreneurship as an alternative desirable career option as they intend to pursue a career involving



self-employment and have plan for opening a venture. In the same vein, some of the graduating physics students submitted that they are confident about their practical skills and abilities and thus ready to make every effort to become entrepreneurs after schools. Indeed, they also prefer to organise a small private firm even if they still work in a big organisation. These results corroborate the finding of Anyakoha (1995), and Ezeani (2012) that integrating entrepreneurship courses in the curricular and employing well trained educators will increase students' knowledge, motivation and interest and create an opportunity for them to have access to a wider variety of entrepreneurial opportunities.

The results of this study indicated that practical skills acquired by graduating physics students have significant impact on their entrepreneurial intention. Thus, level of practical skills acquired by graduating physics education students reflected on their entrepreneurial intention. This outcome is in line with Olawolu and Kaegon (2012) who submitted that entrepreneurship education introduction objective is to develop in graduates, the skills, entrepreneurial orientation and mind-set to prepare for the business, vocational and professional lives after their formal university education.

Conclusion and Recommendations

The study concluded that practical skills acquired by the students' enhance their entrepreneurial intention. Based on the findings of this study, the following recommendations were proffered;

1. Students with low level of practical skills should be encouraged and taken the course from 100 to 400 levels by emphasizing entrepreneurial opportunities of the courses to the students.
2. Students should be given adequate attention to entrepreneurial development in our universities through the provision of good economic environment to encourage individual participation in entrepreneurship, and non-governmental organizations and private sectors should offer free entrepreneurship training, sponsor and offering loans so as to start up their businesses.

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