Exploring the Effects of Entrepreneurial Education on Entrepreneurial Intention between Genders: A Pair-Wise Methodology Approach

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Research

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Exploring the Effects of Entrepreneurial Education on Entrepreneurial Intention between Genders: A Pair-Wise Methodology Approach

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Abstract

Past studies on gender differences in entrepreneurship at higher education levels are predominantly based on survey approaches. Thus creating several mix-evidences with the majority of these studies showing that male intention towards entrepreneurship to be higher than the female counterpart. This research uses a pair-wise experimental approach to examine gender differences in entrepreneurial intention before and after exposure to entrepreneurial education in the six federal universities in south-western Nigeria. The findings indicate that male students demonstrated higher intention before exposure to entrepreneurial education, while female students exhibited the opposite intention. However, after exposure to entrepreneurship education, female students exhibited stronger entrepreneurial intentions compared to their male counterparts. Despite this, no statistical difference was observed between male and female intentions. Yet, when both results were combined to give a composite picture, there was a decrease in the overall entrepreneurial intention for both genders. More so, an in-depth interview with some of the respondents reveals that male students attend an entrepreneurial education course for the sake of it being a compulsory course while female students have the notion that with entrepreneurial education, they have the chance of developing back-up plans if the marriage fails or they are unemployed. This unexpected result indicated the unintended effect entrepreneurial education in south-western Nigeria was having on the gender gap in entrepreneurial intention and its overall outcomes in practical terms. The research concludes that entrepreneurial education curricula in Nigerian universities, especially those in the southwest, need to be reviewed to capture gender sensitivity in entrepreneurial intentions before and after graduation from entrepreneurship programs.

Keywords: Gender, Entrepreneurial Intention, Entrepreneurial Education, Pairwise Methodology, Higher Education, Nigeria.

Introduction

The world of today is not only regarded as a man's world, but women from every sphere of life are trying to be recognized especially in participating in economic affairs. This phenomenon is widely supported by government policies that enhance women's competitiveness (Farr-Wharton & Brunetto, 2007; Ramadani, Gërguri, Dana, & Tašaminova, 2013). This, on the other

hand, has been the objective of the United Nations (UN) ever since 1979 when the UN general assembly had adopted an international bill of women. Besides, Article 1 of the United Nations (UN) Charter lays emphasis on gender equality in all spheres of humanity.

Despite all these, statistics reveal that the percentage of women in business (entrepreneurship) or actively participating in entrepreneurial activities is far lower than that of men. For example, statistics by Zervant (2015) reveals that men are highly engaged in entrepreneurship or entrepreneurial-related activities more than women in Sweden. The statistics show that a higher percentage of men 56% were willing to become an entrepreneur while just 42% of women have the intention of becoming an entrepreneur.

More so, as of 2012, Zervant (2015) recorded that 64% of men started their own business while 36% of women to start their business. Similar statistics were revealed in Singapore, where women occupied just 27.5% of total business owners while the remaining larger percentage of business owners are men Mastercard Index of Women Entrepreneurs (MIWE, 2018). In the same report, MIWE (2018) presents that although Singapore is ranked the 5th country in the world suitable for women to become entrepreneurs, the entrepreneurial gender gap in the latest survey keeps widening.

In academics, similar trends are witnessed, scholars felt concerned that the current entrepreneurial education offered to enhance entrepreneurship activities are male-oriented (Jekwu, 2016; Mushipe, 2013; Ramoni, 2016; Siyanbola et al., 2012). Meanwhile, Shneor and Jenssen (2014) are convinced that after entrepreneurial education class female students have a higher conviction of becoming entrepreneurs. Whereas, Halkias, Nwajiuba, Harkiolakis, and Caracatsanis (2011) posit no gender gap between male and female entrepreneurs. Further studies such as Varamäki, Joensuu, Tornikoski, & Viljamaa (2015) neither support these findings. Instead, the authors conclude that entrepreneurial education decreases the intention of those students with the highest entrepreneurial intention while increasing the entrepreneurial intention of those students with prior lower entrepreneurial intention.

Insight into these diverse arguments reveals one critical issue that needed urgent attention. This is concerned with the methodology adopted in carrying out these investigations. We observed that most of these studies embark on a commonly used survey research methodology to make their conclusions. However, considering the psychological nature of entrepreneurial education with the view of psychologists (Kesse-Guyot, Charreire, Andreeva, Touvier, Hercberg, Galan & Oppert, 2012), the survey methodology employed by several scholars might not be a robust method to evaluate human behavioral change, therefore, they suggest more than a one-time data collection method.

Concerning the arguments presented, the objectives of this study are to examine the contribution of entrepreneurial education offered in developing countries that is, Nigerian universities between genders, by doing this, it is hoped that the gender gap that might exist in the current entrepreneurial education offered might be unearthed. To accomplish this task, a pre-test and post-test “quasi-experimental methodology” is adopted. Nigeria was listed among the African countries with the fastest growing economy (Enweremadu, 2013) hence, making it a potential market for entrepreneurial activities (Austin, Dávila & Jones, 2017). With this view, entrepreneurial education was introduced into the higher education institution's curriculum to enhance students' entrepreneurial intentions which at the later stage, translate into higher entrepreneurial activities (Akpomi, 2009; Garba, 2010) capable of reducing youth unemployment. Ever since the implementation of the entrepreneurial education curriculum, lesser entrepreneurial activities are witnessed in the country. Compared to the economies of developed nations such as the United State of America, the United Kingdom and Germany where several entrepreneurial innovations are carried out. In recent times, entrepreneurial education was argued to create entrepreneurship awareness, nevertheless, its impact is hindered as there are no social support programs for entrepreneurship via business incubation (Kolade,

2018; Mitra, Abubakar & Sagagi, 2011). Thus, graduate unemployment is an ongoing issue in Nigeria (Otache, 2019).

With this view, this study is to expose the gender sensitivity in the current entrepreneurial education offered in developing countries, so that needed action can be taken to address the issue of the gender gap among the students in the society can be addressed. To achieve the study objective, students studying entrepreneurial education in Nigerian Federal Universities in the South Western region were randomly selected, the selected samples were therefore re-examined for post-test investigation after exposure to entrepreneurial education.

Conceptual Evidences

Entrepreneurial Education and Intention

Concerning entrepreneurial education effects, Lackéus (2017) argues some mix evidence which depends on the perceived individual personal gain. According to this author, entrepreneurial education directed at self-oriented idea search leads to neoliberalism in such education. However, entrepreneurial education geared towards the others-oriented search for a meaningful impact mitigates the tendencies of the strong neoliberal education tendencies.

In recent times, attention had been vested on students' intention towards entrepreneurship. Through entrepreneurial education, several scholars argued that the propensity of students becoming entrepreneurs is increased (Alarape, 2009; Opoku-Antwi et al., 2012; Souitaris, Zerbinati and Al-Laham, 2007). An earlier study by Souitaris et al. (2007) concludes that entrepreneurial education enhances the students' attitude and influence positively overall students' intention to become entrepreneurs. Similarly, a recent study of Hatt (2018) did not doubt the stance that universities can instil entrepreneurial characteristics such as opportunity recognition, self-efficacy, risk management, focus and entrepreneurial action in students. Nevertheless, the author concludes that since entrepreneurial education has spread like a wildfire, there is no best way to educate students or no real meaning to educating entrepreneurship students.

Relating to the study by Barral, Ribeiro and Canever (2018) and Canever, Barral and Ribeiro (2017), the university environment contributed to the intention of students to become entrepreneurs during the time they learn entrepreneurial education. On the account of Adelaja and Arshad (2016) examining the intention of public and private universities in the northern region of Malaysia, entrepreneurial education was concluded to have a significant influence on the intention of students to become entrepreneurs. Also, Ndofirepi and Rambe (2017) argue a positive relationship between entrepreneurial education and intention to become entrepreneurs in Zimbabwe's context.

Findings from the study of Roman and Maxim (2017) argues a significant positive contribution of entrepreneurial training at the university level among the students in choosing entrepreneurship as a career path.

Whereas the findings from scholars such as Maina (2011), Mohammed, Rezai, and Shamsudin (2011) and Lorz (2011) argued entrepreneurial education had no contribution to the intention of students towards becoming entrepreneurs. However, these authors argued that those students found with a high propensity towards becoming entrepreneurs have prior knowledge of entrepreneurship. Considering this prior knowledge of entrepreneurship as argued by these scholars, for the sake of this investigation, it can be argued that entrepreneurial education thus influences the intention of students to become entrepreneurs. Hence, the findings from the study of Ahmad and Buchanan (2015) support the no significant contribution

of entrepreneurial education as the authors argue that despite entrepreneurial education exposure, Malaysian students preferred salaried jobs to starting their own firm or businesses.

The study of Varamäki, Joensuu, Tornikoski, & Viljamaa (2015) investigating Finnish students presents two findings regarding entrepreneurial education. The authors argue entrepreneurial education lowers entrepreneurial intention among students who have the initial higher intention to become entrepreneurs while on the other hand, for students with lower intentions, entrepreneurial education raises their intention slightly to an average. Meanwhile, Lekoko, Rankhumise and Ras (2012) in the Botswana context reveals that the failure to realize the effectiveness of entrepreneurship education in equipping students with the needed entrepreneurial skills lies in its design and development.

Contrary to these, the study of Nabi, Walmsley, Liñán Akhtar and Neame, C. (2018) argues that the influence of entrepreneurial education on students' intention varies. According to them, entrepreneurial education offered to the same set of students increases some students' intention while others intention towards entrepreneurship decreases.

Previous findings concerning the influence of entrepreneurial education towards entrepreneurial intention between genders

Gender entrepreneurship had been an ongoing issue, not only in Nigeria but around the world. Several works of literature conclude that male students have a higher propensity to become entrepreneurs than their female counterparts (Jekwu, 2016; Ramoni, 2016). As evidence from empirical investigations by earlier scholars, male students were reported to have a high inclination towards entrepreneurship. For example, the study of Ramoni (2016) argued male students to show more interest in entrepreneurship than their female counterparts. Also, a study by Mushipe (2013) concurs with that of Ramoni (2016) with further arguments that male students have a higher propensity to take the financial risk. On the account of Inegbenbor and Ogunrin (2010), male students have a higher internal locus of control than female students. The study of Paço, Ferreira, Raposo, Rodrigues and Dinis (2015) supports the notion that male students are entrepreneurial inclined than female students.

A meta-analytic review by Haus, Steinmetz, Isidor and Kabst (2013) favours male entrepreneurial engagement over female counterparts. Further findings by these authors argue that female gives up easily in converting entrepreneurial intention to action. This might be because they perceive job security and autonomy as high priority (Yukongdi & Lopa, 2017). Supporting this, Miranda, Chamorro-Mera, Rubio and Pérez-Mayo (2017), a lesser entrepreneurial behaviour was reported among the academic staff investigated. According to the investigation by Nowiński, Haddoud, Lančarič, Egerová and Czeglédi (2019), female students were reported to have lower benefit offered by entrepreneurial education compared to male counterpart.

On the other hand, the empirical investigation of Shneor and Jenssen (2014) argued that female students develop a higher conviction and risk-taking towards entrepreneurship after taking entrepreneur education classes. While in the case of the male, role model and overall network effects exercise a significant role. Whereas, the investigation conducted by Gibson, Harris and Barber. (2008) on Brazilian students, argued no difference in intention to become an entrepreneur between male and female students. A similar study by Ali, Topping and Tariq (2010) on Pakistani students also argues no difference in entrepreneurial intention between genders. A further study from Majumdar and Varadarajan (2013) comparing entrepreneurial intention among male and female students in the United Arab Emirates argued that both male

and female students in the UAE have a higher propensity to become an entrepreneur. A study by Göksel and Aydın (2011) argued no difference in the influence of entrepreneurial education and gender on the intention of students to become entrepreneurs in the Turkish context. On the account of Ramoni (2016), it was argued that to balance the gender gap in entrepreneurial intention, successful entrepreneurs that cut across gender must be invited to have sessions with students. Also, Johara, Yahya and Tehseen (2017) argued gender predict entrepreneurial intention.

Opposing the arguments that favour male entrepreneurship inclination, Smith, Sardeshmukh and Combs (2016) although acknowledge the complex nature of gender on entrepreneurship, however, they conclude a no difference in the relationship between gender and entrepreneurial intention.

Sweida and Reichard (2013) echoed although entrepreneurship is a masculine-dominated industry, females in recent times are gaining upper hand in high-growth entrepreneurship. In support of this, Feder and Nițu-Antonie (2017) conclude that higher entrepreneurial education stimulates entrepreneurial intention among students, especially among women. More so, a longitudinal study by Joensuu, Viljamaa, Varamäki and Tornikoski (2013) argues that the initial level of entrepreneurial intention 'prior experience' does not determine the final entrepreneurial intention after exposure to entrepreneurial education, thus, they conclude that, over time, intention to become entrepreneurs somehow decrease among students. Also, Joensuu et al. (2013) argue a significant effect of gender on entrepreneurial intention.

Given this, this study proposed:

There is a significant difference in entrepreneurial intention between gender before and after taking an entrepreneurial education class.

Barriers to Female Entrepreneurship

In recent times, studies show that female businesses are thriving ever than before in human history (Lock & Lawton Smith, 2016). Despite this, female entrepreneurs were also acknowledged to face some hindrances inhibiting them either from having the intention to be engaged in entrepreneurial activities or to be successful in the entrepreneurial carrier. Some of the factors highlighted by prior studies hindering female entrepreneurship include structural barrier, culture, work and family life balance, family support, spousal support, government policies, access to finance, social networks, mainstream support, political atmosphere (Aidis, Welter, Smallbone & Isakova, 2007; Faisal, Jabeen & Katsioloudes, 2017; Lockyer & George, 2012; Mehtap, Pellegrini, Caputo & Welsh, 2017; Tripathi & Singh, 2018). Contrary stance from Mordi, Simpson, Singh and Okafor (2010) argues that female students in Nigeria are confident, resourceful and enjoyed entrepreneurship.

From earlier studies, factors such as accessibility to training, financial risk and peer influence were identified by Lockyer and George (2012) to inhibit women from entrepreneurship engagement. Similarly, Tripathi and Singh (2018) conclude that authority and societal stereotyping as well as no formal model for engaging women and moving them forward in entrepreneurship practices demoralize women in India to be engaged in entrepreneurial activities. Further findings from the study of Faisal et al. (2017) argue factors such as cultural and religious beliefs, lack of supportive regulatory environment, lack of family support and gender bias to inhibit female entrepreneurship engagement in the Gulf Cooperation Countries.

Meanwhile, Mehtap et al. (2017) are of the opinion that to some extent, potential inhibiting factors of entrepreneurship among young females can be reduced via exposure to a

strong supportive educational system. As noted from the study of Lock and Lawton Smith (2016), although the authors argue that Kenyan women are thriving more than before in entrepreneurial engagement, issues such as lack of entrepreneurial desire, work-life balance, independence, the interest rate on borrowed loan, initiative and ideas are limiting their entrepreneurship performance. To sum it up, education was argued to be a vital factor in limiting these barriers.

Hence, as evidence from these few pieces of literature, in spite of diverse factors that might inhibit female entrepreneurial intention, it can be seen that exposing female students to entrepreneurial education is highly beneficial. This is because it has the potential of mitigating such factors and enhance intention to be engaged in entrepreneurial activities among the female population (Lock & Lawton Smith, 2016; Mehtap et al., 2017).

Methodology

Items Operationalization and Measurement

In this study, the entrepreneurial intention is operationalized as awareness of entrepreneurship or entrepreneurial activities and the potential of creating a new firm (Linan, 2004). The items employed in this study were adapted from the studies of Linan and Chen (2009), Autio, Keeley, Klofsten, Parker and Hay (2001) and (Lüthje & Franke 2003). These items had been used in studies such as (Souitaris, Zerbini & Al-Laham, 2007) to measure entrepreneurial intention among science and engineering students in the US, also the study of Fayolle, Gailly and Lassas-Clerc (2006) adapt these items to measure the impact of entrepreneurial education on entrepreneurial intention among students. The conclusions from these several studies thus attest to the validity and the reliabilities of the items adapted. The items adapted from the work of these scholars have been used and confirmed to be measuring the construct 'entrepreneurial intention'. The items are measured using a 5-point Likert scale. The philosophy behind the adapted items is that they are consistent with the construct operationalization.

Data Collection Procedure

The data used in this investigation were gathered using a set of predesigned questionnaires which are distributed twice. The data collection process follows a pre-test and post-test design approach that is widely used in clinical examination to examine the condition of the subject before and after intervention in the treatment (Eliot, 2015; Frohna, 2012).

The first set of questionnaires distributed to students was used to collect data pertaining to the students' demography (gender) and their entrepreneurial intention at the beginning of the semester before they exposed to entrepreneurial education. The logic behind this is to measure or quantify the students' entrepreneurial intention before exposure to entrepreneurial education. At this stage, students at their various universities were selected randomly targeting at most 25% of the students enrolled for entrepreneurial education course at the six federal universities in southwestern Nigeria. The same set of students was retained for the post-test level.

The post-test data collection was gathered from the same set of students shortly after the end of the semester when they have completed entrepreneurial education syllabus in the semester in which this study was conducted, shortly before their final examination. This helps us to examine the change in entrepreneurial intention before and after entrepreneurial education

exposure. Retaining the same sample will help reduce the chances of a Type II error commonly associated with control and treatment group.

Result

The data were analysed using Statistical Package for Social Science (SPSS) version 23. The analysis employed are, normality, reliability, pairwise sample T-test and effect size.

Normality and Outlier Removal

Before performing the inferential statistics test, the normality checks as posited by Ghasemi and Zahediasl (2012), Kline (1998) and Pallant (2005) were observed. From this process, a total number of 50 items were deleted because the statistical tool categorizes them as outliers. Having skewness greater than ± 1 , following the suggestion of (Hair, Black, Babin, Anderson & Tatham, 2006). The normality results are presented in the Table 1 below:

Table 1: Normality Table

Variable	With Outlier				After Removal of Outlier			
	Mean	SD	Skewness	Kurtosis	Mean	SD	Skewness	Kurtosis
Intent (Pre-test)	3.92	.82	-1.28	1.96	4.03	.63	-.56	-.37
Intent. (Post-test)	3.84	.82	-1.30	1.94	3.91	.69	-.94	1.12

Thus, the data is deemed fit to be analysed for parametric test.

Data Reliability

The item's reliability was checked using Cronbach alpha. As suggested by Zikmund, Babin, Carr, Griffin (2013), items having the value of Cronbach alpha of greater than 0.6 can be used in conducting the analysis. The items used was observed to be highly reliable having .854 and .858 respectively. The Cronbach alpha if items are deleted table for the pre-and post-test is presented in the Table 2 below:

Table 2: Cronbach's Alpha for Pre-test and Post-Test

	Pre-test	Post-Test
I perceive entrepreneurs as successful people.	.832	.839
I would rather be my own boss rather than getting an unsecured job.	.833	.830
I would rather be my own boss rather than getting a secured job.	.835	.845
I have a desire to become an entrepreneur.	.828	.828
My desire to become an entrepreneur is growing on daily basis.	.836	.837
I am determined to create my company in the nearest future.	.829	.831
I am going to start my own business within one year of graduation.	.835	.852
I have started getting information on registering my business.	.862	.865

Data Descriptive Statistics.

The data presents that 48% (252) respondents were male students while the other percentage 52% (272) were female students.

Table 3

Paired Samples Statistics

Respondent's gender			N	Mean	Std. Deviation
male	Pair 1	Pre_Int	252	3.90	.81
		Post_EI	252	3.83	.85
female	Pair 1	Pre_Int	272	3.94	.82
		Post_EI	272	3.86	.80

Table 4

Paired Samples Correlations					
Respondent's gender			N	Correlation	Sig.
Male	Pair 1	Pre_Int & Post_EI	252	-.01	.85
Female	Pair 1	Pre_Int & Post_EI	272	.05	.40

Table 5

Paired Samples Test									
Paired Differences									
			Mean	Std.	95% C. I. of the Diff.		t	df	Sig. (2- tailed)
Respondent's gender					Lower	Upper			
Male	Pair 1	Pre_Int - Post_EI	.07	1.18	-.07	.22	.97	251	.33
Female	Pair 1	Pre_Int - Post_EI	.08	1.11	-.05	.21	1.19	271	.24

To determine the effects of entrepreneurial education between genders, a t-test repeated measure was conducted. The result presents male students' entrepreneurial intention before entrepreneurial education to be ($M = 3.90$, $SD = .81$), after receiving an entrepreneurial education ($M = 3.83$, $SD = .85$), $t(251) = .22$, $p > .05$. While female entrepreneurial intention (pre-test) presents ($M = 3.94$, $SD = .82$) and female entrepreneurial intention (post-test) has ($M = 3.80$, $SD = .80$) under the condition $t(271) = 1.19$, $p > .05$.

Considering Table 4 under paired samples correlation, male entrepreneurial intention has a low negative insignificant correlation coefficient having $p = -.0185$ while, female students' entrepreneurial intention presents a low, positive insignificant correlation having a correlation coefficient .05 at $p = .40$.

Furthermore, the effect of entrepreneurial education on students' entrepreneurial intention was examined using the formula:

$$\frac{\bar{x}_1 - \bar{x}_2}{S.D}$$

Where $\bar{x}_1$ = mean of the pre-test

$\bar{x}_2$ = mean of the post-test

S.D is the standard deviation

For male students we have $\frac{3.90 - 3.83}{.85} = .08$

For female students we have $\frac{3.94 - 3.86}{.80} = .10$

Thus, for both genders, we conclude that there is a low effect of entrepreneurial education offered at Federal universities in southwest Nigeria on intention to become entrepreneurs.

To fulfil the objectives of this study, pairwise t-test known was used in examining the effectiveness of entrepreneurial education on overall population and between genders. The results of each test are presented below:

Inferential Statistics

Table 6

Paired Samples Statistics			
	n	Mean	SD
Pre-test (Int)	474	4.03	.63
Post-test (Int)	474	3.96	.61

Table 7

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 Pre_Int & Post_EI	474	.137	.003

Table 8

Paired Samples Test						
		Mean	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1	Pre_Int - Post_EI	.07284	.82	1.94	473	.05

From the Table 6 above, the analysis presents that the students' entrepreneurial intention at the pre-test level, that is, before exposure to entrepreneurial education syllabus for the whole semester, is relatively high having an average score of 4.03 with $\pm 63\%$. However, the students' entrepreneurial intention at the post-test level decreased significantly to $3.96 \pm 61\%$. The analysis also presents that the difference between the pre-test and post-test students' entrepreneurial intention was significantly positively correlated having $\rho = .137$, $\rho < .05$. Despite this, the pairwise mean comparison presents that at 5% degrees of freedom, there is no significant difference between students' intention before and after being exposed to entrepreneurial education. However, at 10% degrees of freedom, the result presents a significant difference between the pre-and post-entrepreneurial intention among the students investigated.

Similarly, the effect size was calculated for both genders
Thus, we have

$$\frac{4.03 - 3.96}{.61} = .11$$

Conferring to effect size interpretation by Cohen (1988), the effect of entrepreneurial education on students' entrepreneurial intention in this study is small.

In-depth Interview

To gain more insights on the perception of students towards entrepreneurship education exposure, the researcher engaged some few respondents on their view of entrepreneurial education. To get the needed answers, the investigators make sure the respondents are calm, relax and never feel threaten with their responses. The questions and response are presented below.

Question 1:

Researcher: How do you feel about entrepreneurial education?

Summary of male respondents: well, there is nothing special with the program. This is because we just need to pass it and graduate. The male respondents also mentioned that the course is boring, and they cannot digest the importance of the course from other business-related courses.

Female respondents: The female respondents have the notion that, since the economy is not stable, and the way out is marriage. Furthermore, the female respondents reveal that if marriage and employment doesn't work the next back-up plan to survive.

Question 2:

Do you think entrepreneurial education exposure enhances your intention towards entrepreneurship?

Male respondents: well, sometimes you like the course, however, not always.

Female respondents: Female students although with their emotions did not really enjoy the course, however, they think they needed to focus to learn whatever they can so that they can for the uncertain future.

Discussion

Discussion (Quantitative)

Recalling the objectives of this study, which is to examine the overall effectiveness of entrepreneurial education on students' entrepreneurial intention and the effectiveness between genders to suggest a means of bridging the gender gap that was acclaimed by earlier scholars. To achieve these two questions were asked; these are:

- Is there any significant difference in entrepreneurial intention between genders?
- Is there any significant difference in students' entrepreneurial intention before and after exposure to entrepreneurial education between genders?

The result presents that both genders have high-average intentions towards entrepreneurs before exposure to entrepreneurial education. This implies that other than entrepreneurial education, Nigerian students have an entrepreneurial mindset. The reasons for such a mindset, according to earlier scholars is not limited to the economic situation, family background and prior knowledge of entrepreneurship. On the other hand, exposing these students to entrepreneurial education, the results show that there is a stoop in their entrepreneurial intention, however, not statistically significant. This implies that entrepreneurial education offered to these students has no significant effects on enhancing their intention towards entrepreneurship. The observed result in this sense was found to support findings such as Nabi et al. (2018) to contradict earlier studies such as (Adelaja & Arshad, 2016; Alarape, 2009; Opoku-Antwi et al., 2012) where they argue that entrepreneurial education is an important factor that influence or motivate students to become entrepreneurs, but in support of scholars such as Maina (2011), Mohammed et al. (2011) and Lorz (2011) where they all believed that entrepreneurial education has no significant effect on intention of students to become entrepreneurs.

Meanwhile, the insignificant effects of entrepreneurial education in this context might be, and it's not limited to factors such as entrepreneurial education curriculum design and development (Lekoko et al., 2012) or irrelevance of entrepreneurial education content (Agbonlahor, 2016) which Olorundare and Kayode (2014) argued to be the missing link between entrepreneurial education and entrepreneurial realization because of higher entrepreneurial intention.

Examining the direction of the effectiveness of entrepreneurial education on intention between the genders presented in Table 4, the result presents that despite the insignificant effect of entrepreneurial education on intention, there is a difference in perception. The result presents that male students perceived entrepreneurial education to have some negative effects. This observation failed to conform to the conclusion found in the works of (Jekwu, 2016; Mushipe, 2013; Ramoni, 2016; Siyanbola et al., 2012) where they argue that entrepreneurial education is somehow male-oriented course.

Concerning the perceived influence of the female, the result present that female student despite the insignificant effect of entrepreneurial education on their entrepreneurial intention, they have a positive notion that entrepreneurial education does influence students' entrepreneurial intention. The result observed in this regard conforms to that of Egbe-Okpenge and Orhungur (2012) and Shneor and Jenssen (2014) arguing that entrepreneurial education, enhances female entrepreneurial attitudes, increases their conviction and risk abilities after exposure to entrepreneurial education. As well as that of Mordi et al. (2010) arguing that female students are confident, resourceful and enjoy entrepreneurship. While the findings failed to support findings such as Nowiński et al. (2019).

In summary, this study argues that female students examined benefited most from entrepreneurial education offered in federal universities in Nigeria, although the perceived benefit is not statistically significant. With this, it is argued that female students perceived entrepreneurial education to have a positive insignificant contribution to their entrepreneurial intention. Relating these findings to the situation in Nigeria, even though there are lesser entrepreneurial activities happening in the country, yet, more females engage in entrepreneurial activities compared to their male counterparts (Khaled, 2017; Mordi et al., 2010; Onehi, 2017). With this view, this study concurs with the notion posited by Johara et al. (2017) arguing that gender is a predictor of entrepreneurial intention and that entrepreneurial education helps in bridging gender gaps in the country. Although the moderating effects of gender on the relationship between entrepreneurial education and students' entrepreneurial intention was not examined in this study. Yet, the result reveals the importance of gender in this study context.

Concerning the second objective which is to examine the overall effects of entrepreneurial education on the students' entrepreneurial intention, the result presents that at 5% degrees of freedom, entrepreneurial education offered in Federal Universities in Nigeria has no significant effect on the students' entrepreneurial intention. The finding in this regard, therefore, conforms to the arguments of Ali et al. (2010) and Gibson et al. (2008), Lorz (2011), Maina (2011) and Mohammed et al. (2011) where it was argued that entrepreneurial education has no significant contribution to students' entrepreneurial intention. With this, we argue that entrepreneurial education has no significant contribution to students' entrepreneurial intention in the context of the study. Relating this result of this study with the proposed intent of implementing entrepreneurial education in higher education institutions, it is obvious that fewer entrepreneurs can be motivated. Therefore, the program might not be suitable to reduce youth unemployment.

On the other hand, with a less strict rule, that is, using a 10% CI entrepreneurial education was found to have a significant contribution to students' entrepreneurial intention. In this sense, the findings in this regard concur with earlier scholars such as Adelaja and Arshad

(2016), Barral et al. (2018), Souitaris et al. (2007) where these authors argue entrepreneurial education to be a significant factor that contributes to students' entrepreneurial intention. Meanwhile, since the implementation of entrepreneurial education in the country in the early year 2000, less than expected entrepreneurial activities is achieved because the majority of students are not willing to be self-employed. Thus, the significance of entrepreneurial education at 10% of the degrees of freedom in this study is not considered effective.

Furthermore, the analysis presents that there is a positive significant correlation between students' entrepreneurial intention before and after exposure to entrepreneurial education. Thus, it is concluded in this study that entrepreneurial education has a significant positive relationship with students' entrepreneurial intention confirming studies such as (Adelaja & Arshad, 2016; Jekwu, 2016; Mushipe, 2013; Ramoni, 2016; Siyanbola et al., 2012).

The difference in the acceptance level observed led to investigating the effectiveness of entrepreneurial education by examining the effect size. The present an overall low positive effect of entrepreneurial education on the intention to become an entrepreneur. Therefore, despite the insignificant influence of entrepreneurial education on students' entrepreneurial intention among the students investigated, yet, it has a low positive effect on their intention of becoming entrepreneurs (Afolabi, 2015; Odia & Odia, 2013). Therefore, based on the effect size result, we conclude that entrepreneurial education contributes positively to female students' entrepreneurial intention while male students perceive a negative effect of entrepreneurial education on their intention to become entrepreneurs.

Discussion (Interview)

From the respondents' response to the few questions from the researcher, it is clear that male students are detached from the entrepreneurial education course. According to the response given, they felt bored during the entrepreneurial education classes, this makes some of them to skip entrepreneurial classes. However, the female respondents, although, they share similar view like the male counterpart, yet, their responses present that, they manage to stay focus during entrepreneurial education classes. With this, the female students were able to observe the importance of the subject exposure to their future daily lives.

Considering this, the intention of male students failed to be enhanced at the end of the semester. Meanwhile, those of the female students tends to improve.

To realize the effectiveness of entrepreneurial education at a stricter level as the unemployment rate among Nigerian youths stood at the alarming rate of above 13% it is recommended that the university's management revisit entrepreneurial education curriculum, realign it to the practical realities and not just teaching students the 'abstract' or theoretical parts.

Moreover, it is as well recommended that the revisitation to the entrepreneurial education curriculum should be gender inclusive so that the perception of male students concerning the role of entrepreneurial education in enhancing their intention can be changed to positive. In addition, this study urges higher education stakeholders, government agencies and policymakers in charge of the entrepreneurial education curriculum to introduce blended entrepreneurial education; that is, the inclusion of more practicalized entrepreneurial education contents so that male students can relate the relevancy of entrepreneurship taught in class with their larger society.

By doing this, it is opined that the entrepreneurial intention of students, especially male students will be improved, and this could be translated into actual entrepreneurship activities on a larger scale in society. Therefore, graduate unemployment raving Nigerian society could be reduced through entrepreneurial activities. At this stage, we also urge Nigerian students to

embrace the available entrepreneurial education syllabus with a positive attitude. With this, it is opined that the unemployment rate will be significantly reduced.

Having said that, it is opined that the revisitation of entrepreneurial education curriculum in the context of investigation and in Nigeria as a whole will enhance the intention of students towards self-employment and not over reliance of the ‘white collar’ jobs that are not in existence. From the observed result, it is suggested that to realize the positive effect of entrepreneurial education in enhancing students’ entrepreneurial intention, the education should be taught in a less formal or stricter environment.

Although, the samples used in this study are large, however, the generalizability of the result might be biased because the samples used were gathered from a single geopolitical region from the six geo-political zones in Nigeria. Similarly, the attention of the author is geared towards examining the effects of entrepreneurial education on students’ entrepreneurial intention, as such, the moderating effects of gender on the relationship between entrepreneurial education and entrepreneurial intention was left for future studies.

Moreover, this study did not consider students’ attitude towards entrepreneurial education as a factor which might influence their overall entrepreneurial intention at the end of the semester. With this, we encourage future researchers to consider examining the moderating effects of students’ attitudes towards entrepreneurial education on the relationship between entrepreneurial education and students’ entrepreneurial intention.

Conclusion

In summary, entrepreneurial education is vital and needed in the emerging economy to help in reducing high graduates’ unemployment rates witnessed. However, before the effects can be felt, the current entrepreneurial education curriculum needed to be updated to balance the gender gap. With the findings from this investigation, it is concluded that the current entrepreneurial education curriculum being used at federal universities in Nigeria does not only favour male students as argued by earlier scholars. Female students benefited the most and are inclined towards becoming entrepreneurs. While male students’ intention towards entrepreneurship was found to be reduced.

Declaration

- **Availability of data and materials**

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

- **Competing Interests**

The authors declare that they have no competing interests.

- **Funding**

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- **Authors' contributions**

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