



Analysis of Courses Offered by Gender in Faculties of Education and Engineering: Implications for Planning

Oluwalola, Felicia Kikelomo*, Abdulrahman Suyuti Omosidi, A. S. **, Habeeb Tiamiyu***

*Associate Professor, Department of Educational Management, University of Ilorin, Nigeria.

oluwalola.fk@unilorin.edu.ng

** Professor, Department of Educational Management, University of Ilorin, Nigeria. omosidi.as@unilorin.edu.ng

***Mr., Department of Educational Foundation, School of Education, Federal College of Education, Ilawe-Ekiti, Ekiti State, Nigeria. habeebtiamiyua@gmail.com

ARTICLE INFO	ABSTRACT
<p>Article history: Submitted 03.02.2026 Accepted 17.06.2026 Published 30.06.2026</p> <p>Volume No. 13 Issue No. I ISSN (Online) 2414-8512 ISSN (Print) 2311-293X DOI:</p> <p>Keywords: Course Offered, Choice Of Course, Faculty, Engineering, Education, Gender and Planning</p>	<p><i>This study analysed the courses offered by gender in the faculties of Education and Engineering: Implications for planning. An ex-post facto research design was utilised for this study, which targeted a total population of 14,142 students, of which 10,869 are from the Faculty of Education and 3,273 from Engineering at the University of Ilorin. Using Taro Yamane's formula, a sample of 389 students was selected from these faculties through a multistage sampling process. Data were collected via a questionnaire named the Reason for Choice of Course Selection Questionnaire (RCCSQ). The research questions were answered using mean and standard deviation statistics, while t-tests and regression analyses were applied to test the formulated hypotheses. The study's findings indicated that key factors influencing course selection included financial incentives, value addition, and family influence. Additionally, there was no significant difference in the reasons for course selection between students in the two faculties or based on gender. The study recommends that students consider not only financial implications and added value when choosing courses but also their personal interests and strategies for advancement.</i></p> 

Introduction

Higher education is critical in all societies because it plays a crucial role in producing skilled individuals for different sectors of the economy. A key goal of higher education institutions is to expand and enhance their programs to cultivate highly qualified professionals that align with the nation's specific needs (Federal Ministry of Education, 2013). To address the nation's requirements in terms of professionals, universities have implemented a structural plan to educate students in accordance with society's professional needs. Similar courses are organised into faculties, resulting in universities having multiple faculties, such as Education and Engineering. The Education faculty specifically prepares students to become educators for secondary education at all levels nationwide. In contrast, the Engineering faculty focuses on producing skilled professionals and a workforce in civil engineering, mechanical engineering, and other essential fields.

These faculties, similar to other faculties, are crucial in the overall growth of any country. Therefore, it is essential to continuously send students to these fields in certain universities, particularly federal universities, even if the students did not initially select that specific faculty or course. This practice is

implemented to meet the requirements of the profession, and students are usually given the opportunity to accept or decline admission into these faculties. According to Uwaifo (2011), many students in Nigerian universities end up studying subjects that they would not have chosen under normal circumstances. This point is further exemplified by the situation at Ambrose Alli University, where some students who were admitted into the Faculty of Education expressed a desire to switch to a different course. Not only did these students cease requesting and filling out change of course forms, but their desperation also led them to seek support from influential figures in order to exert pressure on their head of department for special consideration in approving their change of courses (Uwaifo, 2011). Similar to what happens in Ambrose Alli University and numerous other universities throughout the country, the researcher noticed an identical pattern of behaviour among the students at the University of Ilorin, where some individuals who applied for courses in different faculties were accepted but then relocated to the Faculty of Education. These decisions made by the university's administration may clash with the desires and preferences of the students who chose their courses for specific reasons and using certain criteria that are only known to them.

Typically, students in universities all over the country base their choice of courses on various factors. At the University of Ilorin, for instance, through the observation of the researcher, many students will mention that they have chosen a particular programme to fulfil their parents' wishes. In contrast, others have claimed to have selected their course in order to emulate the lifestyle of a respected figure in their community. Sometimes, students make decisions about their future careers based on the influence of their peers, while others are driven by their own personal aspirations and interests. This idea is supported by a study conducted by Ajibola, Emeghe, Oluwumi, and Oni (2017) on students' choice of university programs. It was found in the study that 79.4% of students were attending university because it was their parents' choice, but 90% were responsible for choosing their specific course or program based on their own personal interests. Additionally, students' course selection may be impacted by their gender. Females tend to show a preference for Education courses, whereas males tend to gravitate towards Engineering. This suggests that a student's gender could also play a role in his or her choice of university course. However, the findings of the study by Uwaifo (u d) showed that there is no significant difference in the choice of career between male and female students; the sex of a student did not influence his or her occupational preference. However, the characteristics and disparity in the population of the study could account for different results in this study.

These various reasons among the students, most of the time, determine their level of commitment and attitudes towards learning, which could impact students' level of academic achievement. This suggests that the factors behind students' course choices, whether driven by personal interest or external circumstances, can have an external impact on them and may affect their academic performance to some extent. An example of this can be seen in a student who is compelled to take a particular course. They may approach it with a lack of enthusiasm and attach less significance to it compared to a course they have chosen based on their interests. In fact, Osinsawo and Idowu's (2019) study in a Nigerian University of Education on the influence of career choice on the academic performance of library and information science undergraduates in a Nigerian university of education supported the notion that career choice affects the educational performance of undergraduate students. This suggests that it is highly probable that students who actively choose a course and are then accepted into that same course may outperform academically when compared to students whose course selection was influenced by their parents or the university's decision to change their course.

The level of success that students achieve in their academic pursuits, also known as educational achievement, is used as a measure to assess their mastery of a particular subject or course within a specific timeframe. Abdulganiyu and Issa (2021) argued that students' academic excellence is an important measure to assess the efficiency and effectiveness of the educational system in Nigeria. According to Narad and Abdullahi (2016), performance in students' academic endeavours refers to the acquisition of knowledge that is evaluated through grades or the accomplishment of educational objectives established by both students and educators within a particular scheduled time. Trends in students' academic performance, as revealed in students' class of degree every year in the University of Ilorin generally, and the Faculty of Education and Engineering specifically, still show that more attention needs to be given to this critical area. For instance in the University of Ilorin 37th convocation in 2021/2022 in the first degree category, 239 students graduated with first class honour, 3,409 second class upper, 4,691 lower class, 961 third class and 21 pass while in the 38th convocation, 239 graduated with first class honours, 3,406 second class upper, 4,691 second class lower, 961 third class and 21 pass (This Day, 2023). In the 37th convocation, only 1.66% graduated with first class, with a total of 34.29% (first class and second class honours) and the same trend was observed in the 38th convocation, which is quite below average and which is not acceptable. These situations could be a result of course dislodgement. They could be exacerbated if students continue to be forced into their choice of course

selection either through parental enforcement or the University factor itself. This, among others, propels the researcher to examine the analysis of courses offered by gender in faculties of education and engineering: Implications for planning in the University of Ilorin, Nigeria.

Statement of the Problem

While visiting various universities in Nigeria, it has been noted that many students, including those at the University of Ilorin, often end up enrolled in programs that aren't their first choice. As a result, at the conclusion of each academic year, these students frequently seek to switch their courses. Those who manage to transition to their preferred programs typically feel a sense of fulfilment, whereas those who fail to do so often experience psychological distress. This inability to achieve their career goals can lead to enduring adverse effects on their well-being, generating feelings of frustration, emotional turmoil, and challenges in adjusting to their selected professions, which ultimately affects their overall happiness. Additionally, these issues can adversely impact their academic performance, resulting in lower grades.

Related research in this field includes a study by Ajibola et al. (2017) titled "A Study on Students' Choice of Programme in the University," which found that 79.4% of students enrolled in their university based on parental preferences, while 90% chose their courses based on personal interests. Badmus and Jita (2023) also explored factors affecting career choice among STEM undergraduates in Nigerian universities, focusing on science, technology, engineering, and mathematics. In contrast, this research centres on education and engineering students at the University of Ilorin. Although both studies employed similar methodologies, their research approaches differed. Badmus and Jita's findings indicated that career outcome expectancy was a more substantial influence on career choice than interpersonal and intrapersonal factors. Furthermore, Uwaifo (2011) investigated career selection among new university entrants, exploring factors that matter, specifically among students in the Department of Vocational and Technical Education at Ambrose Alli University, Ekpoma, while this study will focus on Education and Engineering students at the University of Ilorin. Uwaifo's study indicated no significant differences between male and female students regarding career preferences, suggesting that a student's gender does not impact occupational choice. Additionally, Eremie (2014) examined factors influencing career choices among senior secondary school students in Rivers State. Brownsom (2014) investigated parental influence on secondary school children's career decisions in the Ondo West Local Government Area of Ondo State.

Through a thorough review of existing literature, the researcher identified gaps in study areas, research methodologies, and variables that previous researchers had not fully addressed. Consequently, this study aims to fill those gaps by analysing course offerings by gender within the faculties of Education and Engineering at the University of Ilorin, Nigeria, and examining the implications for planning.

Objective of the Study

1. ascertain reasons for the choice of course selection in the Education and Engineering faculties, University of Ilorin;
2. examine the difference in the reasons for course selection among students in the Education and Engineering faculties, University of Ilorin.
3. determine the difference in the reasons for course selection among students based on gender at the University of Ilorin; and
4. Investigate whether the faculty could moderate the relationship between students' choice of course and students' academic performance

Research Question

1. What are the reasons for choosing a course in the faculties of Education and Engineering, University of Ilorin?

Research hypotheses

H₀₁: A Significant difference does not exist in the reasons for course selection among students in the Education and Engineering faculties, University of Ilorin.

H₀₂: A Significant difference does not exist in the reasons for course selection among students based on gender at the University of Ilorin.

H₀₃: The faculty does not moderate the relationship between students' choice of course and students' academic performance

Methodology

The design adopted for this study was an ex-post facto research design. With this design, the views of the already existing groups that cannot be manipulated were obtained to ascertain if there is any effect of these different groups on the choice of course selection. The study's population entailed all the students from the 14,142 students in the Education and Engineering faculties, University of Ilorin, as of 2022. This includes the whole 10869 and 3273 students in the Education and Engineering faculties, University of Ilorin,

respectively. Utilising Taro Yamane's formula, 389 students in the faculty were selected. Below are the procedures for selection.

$$n = \frac{N}{(1 + N(e)^2)}; \quad n = \frac{14,142}{(1 + 14,142(0.05)^2)}; \quad n = \frac{14,142}{(1 + 35.355)}; \quad n = \frac{14,142}{36.355};$$

n= 389

Table 1: Sample Table

S/N	Name of University	Number of Students	Sample
1.	Faculty of Education	10,869	$(10869/14,142) \times 389 = 299$
2.	Faculty of Engineering	3,273	$(3,273/14,142) \times 389 = 90$
Total		14,142	389

Field Survey

The study adopted a multistage sampling procedure in the selection of respondents. In the first stage, the proportionate technique was adopted to ensure fair representation from each Faculty. To achieve this, Bowler's (1996) proportionate allocation formula was used. In the last stage, a random technique was used to select the students within each Faculty.

An adapted questionnaire titled the Reason for Choice of Course Selection Questionnaire (RCCSQ) was used for data collection from the students. Due to the disparity in the subject locale, the questionnaire was subjected to a validity test. The instrument was given to experts in the field of education to check for both face and content validity in the context of this study. The recommendations of the experts were incorporated, and the questionnaire was administered to the population of the study, which was not part of the sample for this study, to ascertain the relevance and clarity of the items of the questionnaire. To determine the reliability of the questionnaire, Cronbach's Alpha measure of internal consistency was used, and a coefficient of 0.872 was obtained for (RCCSQ), indicating that the questionnaire was reliable. Mean rating was used to answer the questions raised, while inferential statistics of t-test and regression analysis were used to test the formulated hypotheses at a 0.05 level of significance.

Results

Question 1: What are the reasons for choosing a course in the faculties of Education and Engineering, University of Ilorin?

Table 2: Reasons for the choice of course selection in the faculties of Education and Engineering

SN	Items	Mean	Sd	Remark
1.	I look for opportunities to achieve a higher social status	2.96	.493	Agreed
2.	I am constantly looking for ways to get ahead	2.22	.615	Disagree
3.	Hearing others praise me is something I look forward to	2.58	.758	Disagree
4.	I try to make sure others know about my success	2.46	.787	Disagree
5.	I keep an eye out for my interests	2.20	.808	Disagree
6.	Having much money is one of my goals in life	3.30	.544	Agreed
7.	Success is important to me	2.22	.648	Disagree
8.	Getting good grades is near the top of my priorities	2.36	.692	Disagree
9.	I am constantly looking out for what will make me happy	2.82	.691	Agreed
10.	My friends influence my choice of course selection	2.92	.488	Agreed
11.	I chose the course because it is marketable	2.82	.744	Agreed
12.	It is what other members of my family have been doing	3.16	.618	Agreed
13.	Persuasion from my parents	3.06	.682	Agreed
14.	To add value to myself	3.28	.573	Agreed

Decision Rule: 1.00-2.50 (Disagreed); 2.51-4.00 (Agreed)

Table 2 revealed the students' responses to the reasons for their course selection in the Education and Engineering faculties. The results of the study showed that students agreed that items 1, 6, 9, 10, 11, 12, 13, and 14 are reasons for their choice of course selection and disagreed with items 2, 3, 4, 5, 7, and 8 as their reasons for choice of course selection. The analysis further revealed that students mostly agreed with item 6, 'having much money is one of my goals in life', with the highest mean score of 3.30 as their primary reason for their choice of course selection, which is closely followed by item 14, 'To add value to myself', and item 12, 'it is what other members of my family have been doing'. Further analysis showed that item 2, 'I keep an eye out for my interests', had a mean score of 2.22, with students citing it as the least common reason for their choice of course.

H0₁: A Significant difference does not exist in the reasons for course selection among students in the Education and Engineering faculties, University of Ilorin.

Table 3: t-test analysis on the difference in the reasons for course selection among students in the faculties of Education and Engineering

Group	N	Mean	Sd	t-value	p-value	Decision
Education	287	2.56	.421	.535	.620	Retained
Engineering	89	2.92	.688			

P-value>0.05

Table 3 revealed a non-significant t-value (.535) at a 0.05 alpha level (0.620>0.05). This shows that the null hypothesis stated earlier was retained and the alternative hypothesis rejected. Thus, there was no significant difference in the reasons for course selection among students in the Education and Engineering faculties at the University of Ilorin.

H0after₂: A significant difference does not exist in the reason for course selection among students based on gender at the University of Ilorin.

Table 4: t-test analysis on the difference in the reason for course selection among students based on gender

Group	N	Mean	Sd	t-value	p-value	Decision
Male	204	2.67	.768	.327	.500	Retained
Female	172	2.81	.812			

P-value>0.05

Table 4 showed a non-significant t-value (.327) at a 0.05 alpha level (0.500>0.05). This indicates that the null hypothesis stated earlier was retained and the alternative hypothesis rejected. Thus, there was no significant difference in the reason for course selection among students based on gender at the University of Ilorin.

H₀₃: The faculty does not moderate the relationship between students' choice of course and students' academic performance.

Table 5: Model Summary table on the relationship between students' choice of course and students' academic performance

R	R-Square	MSE	F	df1	df2	p	Decision
.5411	.2927	.2598	51.3242	3.0000	372.0000	.0000	Significant

Table 5 showed that students' choice of course significantly contributed 29.3% to students' academic performance. This indicates that when the variability in students' choice of course selection increases by one standard deviation, there will be a consequential increase in students' academic performance.

Table 6: Moderating effect of students' faculty on the relationship between students' choice of course and academic performance

Variable	β	se	t	p	LLCI	ULCI
Constant	.6227	.6129	1.0161	.3103	-.5824	1.8278
Choice of Course => Academic performance	.8170	.1965	4.1588	.0000	.4307	1.2033
Faculty => Academic performance	.0899	.4091	.2199	.8261	-.7144	.8943
(Choice of course * faculty) => Academic performance	-.0121	.1313	-.0919	.9269	-.2702	.2461

Table 6 presents the moderating role of students' faculty on the relationship between students' choice of

course and students' academic performance. The result revealed an adverse, non-significant moderating effect of students' faculty on the relationship between students' choice of course and students' academic performance ($\beta = -.0121$; $t = -.0919$, $p = 0.9269 > 0.05$). This shows that students' faculties, Engineering and Education, do not moderate the relationship between students' choice of course and students' academic performance.

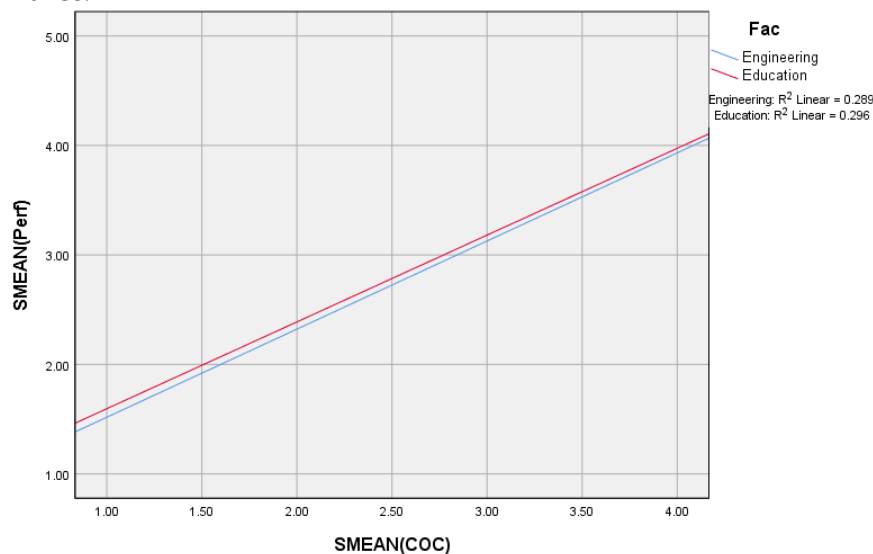


Figure 1: Moderation graph on the effect of students' faculties on the relationship between students' choice of course and students' academic performance

In addition, the moderation graph presented in Figure 1 shows the moderating effect of students' faculties on the relationship between students' choice of course and students' academic performance. The moderation graph showed no interaction between students' faculties, education, and engineering in terms of the relationship between students' choice of course and students' academic performance.

Discussion of Findings

The research findings illuminated the reasons behind students' course selection in the faculties of Education and Engineering. The results indicated that students identified several reasons for their choices, such as seeking higher social status, earning a substantial income, pursuing personal happiness, and being influenced by friends and family members. Factors like parental persuasion and the added value of a course also played a role. However, students expressed disagreement with motivations such as a desire to get ahead, seeking recognition, focusing on personal interests, or prioritising good grades. Further analysis showed a consensus among students that financial gain is a significant goal in their course selection. This aligns with the observation that many students in Nigeria tend to avoid educational courses due to the perception of teaching as low-paying. At the same time, they are drawn to medical professions due to the belief that doctors earn significantly more than their peers in other fields. Additionally, familial influence was noted as a factor, as parents often dictate the courses their children pursue, leading students with limited experience to comply with those choices. This finding is parallel to Ajibola et al. (2017), who found that 79.4% of students enrolled in university based on parental preference.

Moreover, the study found a non-significant t-value (.535) at the 0.05 alpha level ($0.620 > 0.05$), suggesting that the initial null hypothesis was retained while the alternative hypothesis was rejected. This implies no significant difference in course selection reasons between students in the Education and Engineering faculties at the University of Ilorin. This indicates a similar pattern in motivations for course selection across these fields.

The results regarding gender also revealed no significant difference in the reasons for course selection among male and female students at the University of Ilorin. This suggests that gender does not significantly influence students' course choices, corroborating findings from Uwaifo (2011), which indicated no difference in career preferences between male and female students.

Furthermore, the study showed that faculty do not moderate the relationship between students' course choices and their academic performance. It revealed that the contribution of course selection to academic performance is not significantly different between Engineering and Education students. Although a significant relationship between course selection and students' academic performance was identified, the strength of this relationship did not markedly differ between the two faculties. This finding is in agreement

with the research by Yakubu and Ibrahim (2020), which noted that students placed in programs they did not choose or understand often experienced lower academic performance and higher dropout rates. Similarly, the outcome aligns with Chkwuemeka and Ogbodo (2021), who examined the link between purposeful course selection and academic success.

Conclusion

The study investigated the course offered by gender in faculties of Education and Engineering: Implications for planning. The findings of the study indicated that the students' goals in choice of course selection generally are based on the students' earning ability, value addition and the choice of their family members on what the students should be offered in school and less on students keeping an eye out for their interests and constantly looking for ways to get ahead. In addition, the reasons for the course selection in the faculties of Education and Engineering, University of Ilorin, do not differ regardless of students' gender or department.

Recommendations

1. Students should not only look at financial implications and value addition when making choices for course selections. Still, they should also keep an eye out for their personal interests and constantly look for ways to get ahead.
2. The University authority and other relevant bodies within the University should organise an orientation programme to enlighten the students on what they can achieve with their course and the substance of their various courses in the broader community.
3. There should be adequate provision of sensitisation among the students to enlighten them on the equal roles of males and females in their various fields of expertise.
4. The University administrators should not place students in programs they did not choose or understand, as it could negatively impact their level of academic performance.

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