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Admission into real estate undergraduate education in Nigerian universities

The clog in the wheel

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Abstract

Purpose – The purpose of this paper is to examine the impact of a compulsory pass in physics on undergraduate admission into estate management programme and the requisite skill for practice.

Design/methodology/approach – Data were collected from students in selected Polytechnics and a University in South-western Nigeria. Descriptive statistics was used to analyse the data. Also, One-Way Analysis of Variance (ANOVA) was applied to test the difference between the means of the independent variables and application for admission. The mean plot was used to analyse the different groups of students seeking direct entry admission into the university.

Findings – Analysis shows that 18 per cent of the students seeking admission through direct entry would be denied because they have no credit score or a pass in physics in their Ordinary Level ("O" level) result. Remarkably, high school physics is a compulsory requirement for admission. Findings show that the subject is unacceptable in the Unified Tertiary Matriculation Examination (UTME). An annual average of 10 prospective students who wrote physics in the UTME, but with a pass in it in the Senior Secondary School ("O" level) examination were denied admission at the point of registration. Findings from the hypothesis test show that there is no significant relationship between the rate of application for university admission into Real Estate programmes and students who took physics and had at least a pass in it. Also, the mean plot shows that more Art students would apply for admission compared with science and commercial students. Finally, analysis shows that 83.3 per cent of the students who have gone for Industrial Work Experience Scheme were of the opinion that physics has no role to play in their acquisition of the requisite job skills in Real Estate.

Research limitations/implications – This study may be limited by the sample size of the universities selected for data collection. The impact of the requirement of a compulsory pass in physics for admission into real estate programme in other universities with a similar requirement is not covered.

Practical implications – The findings implied that a compulsory pass in physics constitutes a clog in the wheel of admission of prospective estate management students. This may affect career progression and the number of the Estate Surveyors and Valuers that are expected to render professional service to real estate investors in Nigeria.

Originality/value – This is the first attempt to examine the impact of variation in admission requirement into the real estate undergraduate programme in Nigeria. The novelty is in the analysis of a compulsory requirement of pass in physics for admission and the requisite skill for real estate practice in Nigeria.

Keywords Education, Real estate, Skill, Admission, Physics, Requirement

Paper type Research paper

1. Introduction

From time immemorial, man has engaged in the practice of estate management but without formal training. Basically, real estate practitioners acquired their skills on the job over time. As real estate practice became more complex, technical and globally interconnected, it became necessary to streamline the acquisition of skill through formal education (MIT, 2017). This helped to keep pace with global demand for professional and specialised skill of the new age. Today, a successful real estate practice requires specialized training from an accredited institution of higher learning. According to Dasso and Woodward (1980), University of Wisconsin admitted the first set of students for courses in real estate

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programmes in Wisconsin in 1892. As reflected in the entrance essay, the requirements for admissions were based on personal qualities. The university did not consider quantitative academic measures such as GPA, class rank, and test scores.

The interdisciplinary approach to estate management education from the leading institutions in the US and UK is widely recognised. However, it is pertinent to note that the two countries take different approaches to real estate education. In the US, universities combine multidisciplinary and financial management approaches to real estate education. On the contrary, the approach is more of valuation in the UK. Many other countries across the world model their approaches to Real estate education on practices in either of the two countries where the study began. Notably, Nigerian academics have approached real estate education in line with the UK where the first set of professional Estate Surveyors and Valuers in Nigeria was trained. Real Estate study has been part of the Nigerian tertiary education for over fifty years and during this long period, Nigerian universities have acquired a lot of experience. The unique character of the department of real estate that cuts across Nigeria and the UK institutions is that it is mainly domiciled within the school of the built environment. This has implications on the admission requirements and learning outcomes.

Without an exemption, every institution has specific requirements for admitting students into different courses of study. In most universities in the UK and USA of America, admission into undergraduate programme in Estate management is point based. This is based on the grade scored by candidates in the General Certificate Examination (GCE) or Advance level (A Levels) subjects. However, many Universities in Nigeria which embraced the study lately have varying admission criteria. For instance, the "O" level subjects required for admitting students in different universities differ. This variation is also noticed in the required subjects in the Unified Tertiary Matriculation Examination (UTME) entrance examination. For instance, in Federal University of Technology, Akure (FUTA) and some Private Universities in south western Nigeria, the logic is unclear that explains the "O" Level examination and the UTME subjects for admitting students. For example, FUTA requires a credit or a pass in physics in addition to the basic "O" level subjects required for admission into estate management undergraduate programme. However, it does not accept the same subject as of the UTME entrance examination. While the rationale behind this practice remains unknown, the impact of the requirement on the prospective students cannot be de-emphasised. The goal of becoming an Estate Surveyor and Valuer is thwarted, even as the discrimination between Bachelor's degree and Higher National Diploma (HND) certificate deepens. Similarly, the contribution of physics in the skill acquired by graduates to perform a job is unknown, particularly from the perspectives of the students who have passed through industrial training. The requirement of a compulsory pass in physics for admission cuts across undergraduate and postgraduate programmes. For instance, an academic in estate management department in FUTA who graduated from a sister university where physics is not a requirement is required to provide at least a pass in physics for admission into doctorate degree programme. With this requirement, it is obvious that admission into real estate programme is skewed towards science students. Therefore, it is important to ask a question on the "O" level subjects' background of the prospective students and how it affects their applications for undergraduate admission in the University. Though a compulsory credit or a pass in physics is required for admission into all the major programmes in the concerned universities, the scope of this paper is restricted to admission into the undergraduate study.

2. Literature review

According to Dasso and Woodward (1980) economics, urban affairs, law, marketing, Information and communication technology and environmental science are important

elements of real estate education in the twenty-first century. To a large extent, these dictate the subjects required for admission into the programme. A thorough search of existing literature shows that there are no academic papers which examine the impact of physics on admission and the skill needed for a job in estate management. The study reviewed related literatures to establish best practice for admission requirement into real estate university education from global perspective. Mooya (2015) examined the state of real education and estate practice in South Africa, using primary data from registered Estate Surveyor and Valuers and University of Cape Town valuation curriculum. The result suggested that there are concerns regarding proficiency in some valuation approaches among the professionals. The study also noted that the South African curriculum falls short of the international standard. Poon *et al.* (2011) also analysed real estate education among the multiple stakeholders in the UK. From the employers' point of view, the study found that commercial awareness of the new graduates is poor. Similarly, Poon (2014) corroborated the finding by noting that employers have issues with the commercial awareness of new graduates. Based on the previous findings on employers' observations of real estate graduates in the UK, Poon and Brownlow (2015) also conducted a survey to find out students' view on the incorporation of commercial courses into their programme. The students agreed that the commercial component which describes the ability to understand the economics of business is the largest portion of their courses. The study found that commercial awareness is an important employability skill and advised academic to revisit the curriculum to ensure that learning outcomes relating to commercial awareness are explained to the students.

Black *et al.* (1996) identified a wide gap between the knowledge acquired and skill requirements. The authors advocated the inclusion of some basic knowledge in the curriculum of real estate education for effective practice. According to the authors, negotiation skills, information gathering and processing are basic requirements of an estate surveyor for the effective practice of corporate real estate market. Prompted by the weaknesses in the core area of competences such as valuation and land administration in Nigeria, Oloyede and Adegoke (2012) and Falana and Ataguba (2011) argued for the development of the real estate education curriculum with specific reference to Nigeria. Correspondingly, a related study was conducted by Egbenta (2015) on the employability skill of the graduates of estate management in Nigeria. The study found a high level of dissatisfaction with the graduates' skills which affect productive employment. The study recommended that the inclusion of a topic in the professional practice course would enhance the employability skill of graduates of real estate.

Connor and Brown (2009) explored the value of graduates from the employers' perspective. The study revealed that specific specialist skills and subject knowledge plus more generic personal skills such as analytical thinking, research, communication, planning skills and new ideas added the most substantial value to the employers. They concluded that higher education institutions need further efforts especially through more work experience and contacts with employers to ensure that graduates develop the capacities for doing businesses. Some studies have also been carried out in the Nigerian local context in response to the spate of complaints regarding deficiencies in the core areas of competencies. A study conducted by Ashaolu (2012) suggested a deeper development of the core area of competence of valuation. In a related study, Ashen and Gambo (2012) underscored the value of inculcating integrity, discipline and high ethical behaviour into real estate education curriculum. Kakulu and Plimmer (2009) studied the contrast between vocational education for surveyors in Nigeria and England. The study argued that the neglect of the history, norms and socio-cultural issues in real estate education in emerging economies like Nigeria is a threat to sustainable professional practice. The paper concluded that the specific spatial competence, cultural, socio and political requirements of real estate education should not be compromised.

Other scholars, such as Newell *et al.*, (2010), Ezema *et al.* and Oladokun (2012), also examined the relevance of real estate education to practice in different countries and argued for a development of course curriculum to strengthen the different aspect of the profession. Importantly, the scholars realised that employers place more priority on financial analysis and marketing skills of graduates. Yu (2001) traced the development of real estate education over the last few decades. The author examined the various taught courses that had shaped real estate education. The study identified technological advancement and globalisation as tools necessitating a paradigm shift in real estate education. The study recommended that for real estate education to continue to be relevant to the professions as well as the new business environment, the real estate curriculum would need to be flexible. Furthermore, it recommended the incorporation of new development and easy update of existing modules. Despite the various problems affecting estate management education and the requisite job skill, the generic suggestion among academics is the development of the course curriculum. Although the course curriculum influences the required subjects for admission, none of the previous studies suggested a compulsory pass in physics as one of the admission criteria.

3. Admission policies and requirement for real estate education

While the previous studies provide a background on the challenges of real estate education from the global perspective, their focus is largely on real estate curriculum and graduates employability skills. The obvious knowledge gap is the inconsistencies in the specific subjects required for admission and their impact on students' enrolment into the programme. Rationally, the "O" level subjects are foundational and presumably dictated by the specific course curriculum and the expected learning outcome. According to Henly Business School (2017) prospectus, there are four pathways to undergraduate programme in estate management, namely investment, development, management and rural business studies. The expected learning outcome is a strong understanding of the core subject areas of economics, finance, business management, planning law and construction which could be applied to solve complex real estate problems in the field. In the UK and the USA, where formal education on the real estate profession began, prospective students from the High School are only expected to pass the relevant subjects with good grades for university admission (see Table I for the admission requirements for real estate education in some universities in the UK).

Conversely in Nigeria, admission requirements into the programme are two folds. First, the secondary school compulsory credit pass in some relevant subjects. Second, prospective students are expected to write Unified Tertiary Institution Matriculation Examination (UTME) in four subjects. While this paper does not condemn the stages involved in the admission process, inconsistencies in the admission requirements remain its primary concern.

3.1 Admission policies and requirements for real estate education in Nigeria

Until recently, the admission of prospective students into Nigerian universities for real estate education and other courses was quite limited due to the inadequate number of universities. Also, as observed by Okoroma (2008), the problem of admission into any course in Nigerian University is associated with unpopular government policies. They include:

- The catchment area policy which limits and delineates the geographical location from which a prospective student could be admitted.
- Compulsory reservation of placement for students who are from an educationally disadvantaged state.

Universities	Secondary requirements	Direct entry requirement
Kingston University, London, UK	Points: 112 (BBC at A level) Units: to include at least two A levels or equivalent GCSE: five subjects grades A-C including Mathematics and English Language (or comparable numeric score under the newly reformed GCSE gradings)	We will consider a range of alternative qualifications that are equivalent to the typical offer Qualification Requirement BTEC National Diploma DMM (Distinction, Merit, Merit) plus five GCSE grades A-C including Mathematics and English Language
University of Readings (Henly Business School)	Typical offer, A Level AAB-ABB, 32-34 points overall.*Subjects required: No required subjects although Economics, Geography, Business Studies and Mathematics are all relevant. GCSE, Maths and English at grade B or above	
University College of Estate Management, London	A levels, Grades: AAB, Subjects: No specific subjects. GCSEs: English Language and Mathematics at grade C. For UK-based students, a grade C or equivalent in a foreign language (other than Ancient Greek, Biblical Hebrew or Latin) is required	A Diploma with Points 36, and for Subjects, a score of 17 points in three higher level subjects, with no score lower than 5
University of Aberdeen	SQA Highers-AABB A Levels BBB IB-32 points	Direct entry is considered on individual basis depending on prior qualifications and experience

Table I.
Admission requirement for real estate programme in some universities in the UK

- The quota system defines the number of students that could be admitted from various parts of the catchment area. It also affects the number of students that are admitted into various departments.
- Discriminatory fee policy among students who are not from the state where the university is located.

While these policies affect students' intake in the universities, there are other entry requirements which may locally affect students' admission into real estate programme in Nigeria. They are usually set by the course providers as a guide to the needed academic ability. These requirements are specific qualification**s**, subjects or high grade in a certain subject (or subjects) relevant to the course applied for. These "O" level subjects required for admission vary among universities in Nigeria (see Table II for details). With specific reference to the subjects required for admission into the programme, Falana and Ataguba (2011) noted that some universities have reduced the importance of certain subjects as entry requirement for real estate education. He suggested the need to incorporate technical/vocational subjects like Building Construction, Technical Drawing, Woodwork, Metalwork, Fine-Arts, Commerce, Accounting and Agricultural Science as admission requirement.

4. Data collections

The target population for this study comprises students of two selected Polytechnics and a University in South-western Nigeria. The polytechnics considered are Rufus Giwa Polytechnic in Owo and Federal Polytechnic Ado-Ekiti. These schools were included in the sample frame because they are within the catchment area from where prospective students are admitted into the University. The target population are the students in the second year of the Ordinary National Diploma programme. The students were

S/NO	University	Location	UTME Requirement	O'LEVEL Requirement
1.	CU-Covenant University	Sango-Ota, Ogun State	English language, Mathematics, Economics, and one science subject	English language, Mathematics, Economics, 1 of Physics, Chemistry, or Biology, and 1 of Geology, Technical Drawing, or Building Construction
2.	OAU- Obafemi Awolowo University	Ile-Ife, Osun State	Mathematics, English language, Economics, and any other subject	Mathematics, English language, Economics and any of Geography, Chemistry, Physics, Biology, Fine Arts, Technical Drawing, or Building and Surveying
3.	UNILAG-University Of Lagos	Lagos State	Mathematics, English language, Economics, and any one of Physics, Chemistry, Biology, or Geography and Accounting as the fourth subject	Mathematics, English language, Economics and any of Geography, Chemistry, Physics, Biology, Fine Arts, Technical Drawing, or Building Construction and Surveying
4.	FUTA- of Technology Akure	Akure, Ondo State	English language, Mathematics, Economics and any other subject from Geography, Chemistry, Agricultural Science or Biology, Commerce, Government and Technical Drawing	English language, Mathematics, Economics, Geography and one other Science subject including at least a compulsory pass in physics
5.	BELLS University	Sango-Ota, Ogun State	English language, Mathematics, Economics and any other subject from Chemistry, Geography or Physics	English language, Mathematics, Economics and any other subject from Chemistry, Geography or Physics
6.	CRESCENT University	Abeokuta, Ogun State	English language, Mathematics, Economics and one other Science subject	English language, Mathematics, Economics and any other two subjects from Chemistry, Physics, Business Studies/Commerce, Geography, Biology, Agricultural Science or Technical Drawing
7.	UNIOSUN-University of Osun	Osun State	Mathematics, English language, Chemistry, and Physics	Mathematics, English language, Chemistry, Physics, and Geography.
8.	JABU Joseph Ayo Babalola University	Osun State	English language, Physics, Mathematics, and Chemistry	English language, Physics, Mathematics Chemistry and any one of Geography, Fine Art, Woodwork, Technical Drawing, Biology or Economics

Table II.
Showing universities in South-western Nigeria and their requirements

included to determine the specific impacts of a compulsory pass in physics on the career progression of those who wish to pursue a Bachelor's degree in Real estate. Data were collected from the students using a close-ended structured questionnaire. The Polytechnic students were asked to indicate the "O" level subjects they took in their Senior Secondary School Examination and specify their grades in physics if they took it. Moreover, they were also asked to signify their intention to apply for direct entry admission into a Bachelor's degree in FUTA or HND programme in Estate management. The Federal University of Technology Akure was selected among the universities requiring a compulsory credit or pass in physics for admission. I considered the final year students of estate management department at the Federal University of Technology Akure (FUTA) for the collection of primary data. This group of students was chosen because they were part of Students' Industrial Work Experience Scheme. Consequently, they are in the best position, compared to other students at the lower levels to provide information on the contribution of physics to the skill needed for a successful practice. Data were also collected from existing record at the departmental office of the university to determine the impact of compulsory pass in physics on first year students' admission.

4.1 Sample size and technique

The sample frame includes the total number of students in National Diploma II and the final year students of the selected institutions. The sample frame is 272, and comprises 92, 93 and 87 students of Rufus Giwa Polytechnic, Federal Polytechnic Ado Ekiti and FUTA, respectively. The study adopted census survey method for questionnaire administration. However, a total of 160 questionnaires were completed and retrieved for analysis. The study employed descriptive statistics to analyse the data.

4.2 Hypothesis

The null hypothesis for the study states that there is no significant relationship between the mean application for direct entry admission into the "O" level subjects background of the university and the polytechnic students. The hypothesis assumes that the population means of the independent variables are equal where the independent variable is the subject background of the students with three levels (k). The three levels of k include students with Art, commercial, and science subjects' background.

Therefore, the null hypothesis could be mathematically stated as:

$$H0: \ \mu 1 = \mu 2 = \mu 3$$

where $\mu 1$ = Students with science subjects' background; $\mu 2$ = Students with commercial subjects' background; $\mu 3$ = Students with Art subjects' background

The dependent variable is the application for higher degree. It comprises two levels, namely application for HND and direct entry application for Bachelor's degree in FUTA.

5. Analysis, discussion and findings

The result shows a blend in the composition of the subjects which students tendered for admission into real estate programmes in the Polytechnics. Three categories of the polytechnic students with different subjects' combination in "O" level examination were identified. They include 10.11 per cent of students with commercial subjects' background, 18.90 per cent of Art and 70 per cent with pure science subjects' background. This shows flexibility in admission requirement and consistency with what is obtainable for admission into the same programme in the University of Reading and University of Aberdeen (see Table I). Concerning application for direct entry admission into FUTA, analysis shows that 18 per cent of the polytechnic students did not have physics as part of their "O" level subjects. This implies that they would be denied admission regardless of a brilliant performance in the UTME. In addition, 82 per cent of the students who had at least a pass and wish to apply for undergraduate admission into estate management programme may not have difficulties. Conversely, 66.7 per cent of those with at least a pass in physics prefer to apply for HND admission in the polytechnics. Also, 33.3 per cent of students without a pass in the subject prefer to apply for admission to universities (see Table III for details).

Remarkably, the subject becomes an elective course alongside Chemistry and Biology at the first year (see Table IV for the list of courses a first year student is expected to be offered). Debatably, it implies that students could decide not to offer physics, thereby subjecting the role of such requirement to important academic question.

Table III.
Cross tabulation of students with a pass in physics and application for admission in FUTA

Credit/pass in Physics	HND%	Direct entry admission in FUTA %
YES	66.7	82.0
NO	33.3	18.0
TOTAL	100	100

	Course code	Title	Unit
1	GNS 101	Use of English	2
2	GNS103	Information Retrieval	1
3	ESM 101	Introduction to Estate Management	3
4	MEE 101	Engineering Drawing	3
5	ARC 101	Graphic Communication 1	2
6	URP101	Nature of Environmental Science	2
7	MTS 101	Introduction to mathematics 1	3
Electives courses (students are to choose one of the followings)			
8	BIO101	General to Biology	4
9	CHE101	General Chemistry	4
10	PHY101	General physics	3
11	PHY107	General Physics, Lab.I	1

Table IV.
First-year courses in estate management in FUTA

Concerning the university students, the analysis shows that all the final year students considered for questionnaire administration had a credit or a pass in physics. However, previous admission records in the University show that the impact of physics on prospective students took a dramatic turn here. For example, 10 out of the 52 students recommended for undergraduate real estate programme in the 2016/2017 session were denied admission. Among these, 7 of the students satisfied the compulsory requirement for credit and or a pass in physics in the "O" level examination but had physics as one of the UTME subjects. The remaining three students neither offered physics nor had a pass in it in their "O" Level subjects but had the correct subject combination in the UTME entrance examination. Findings revealed that physics suddenly becomes an unacceptable subject for UTME. It is difficult to reconcile the rationale behind this inconsistency. This development has prevented so many students from realizing their dreams as Estate Surveyor and Valuers.

Expanding the findings on the rationale behind a compulsory pass in physics in the admission requirements, this study examines the variation in the number of students who did not choose physics as an elective course in their first year. Figure 2 shows a 5-year trend of students who did not choose physics as an elective course. The graph revealed that more than 87 per cent of the students did not take physics in their first year in FUTA in the year 2012 and 2013. The lowest record was obtained in the year 2014 when 66 per cent did not choose physics as an elective course. However, in the year 2015 and 2016, 95.10 and 96.60 per cent of the students did not choose physics as an elective course. With this record, it is obvious that the students attached no relevance to physics as one of the subjects needed to acquire the requisite skill for practice. This defeats the purpose of a compulsory pass in physics for admission (Figure 1).

The study assessed the contribution of physics to the expected job skills among the university students who have gone for student industrial work experience scheme. Analysis reveals that 83.3 per cent of them noted that physics has no contribution to the requisite skill for practice. With this result, it shows that physics has no contribution to the expected learning outcome. There is no connection between physics and a strong understanding of the core subject areas of valuation economics, finance, business management, planning law and construction which could be applied to solve complex real estate problems. Having analysed the impact of physics on the prospective students' admission, the study analysed the result of the hypothesis to determine the group of students who are most likely to be affected by this rule. In line with other parametric statistics, the analysis began with a test of the underlying assumption of the One-Way ANOVA statistics. The assumption for homogeneity of variance among the three groups of students with different subject

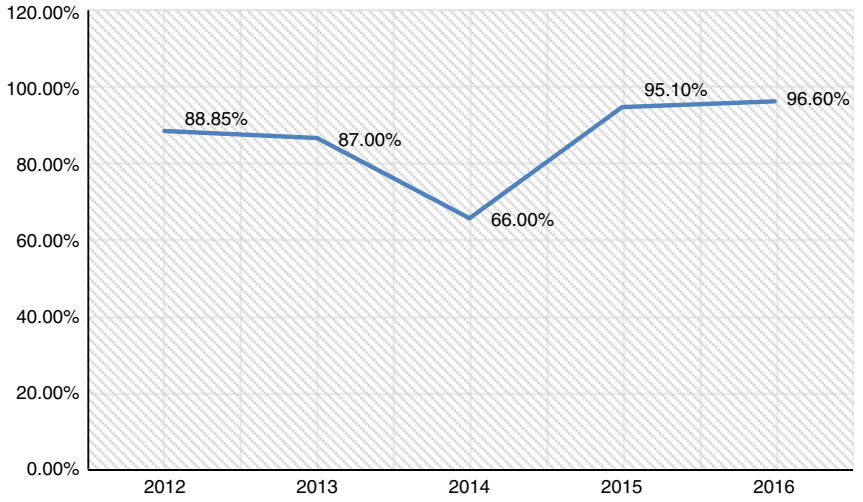

Figure 1.
Trends of students who did not take physics in their first year in FUTA

backgrounds was tested. Using Levene's test, the results (F (2, 118) $= 0.78$, $p = 0.46$) show that the variance is not significantly different. The sig. value (0.46) is greater than 0.05, implying that the assumption of homogeneity of variance is not violated (see Table V). Therefore, H_0: $\sigma_1^2 = \sigma_2^2$.

The result of the descriptive statistics of the one-way ANOVA applied to analyse the hypothesis is shown in Table VI. The value of the confidence interval at 95 per cent at the lower and upper bounds is greater than zero. The result shows that there is a difference in the mean application for direct entry admission into Bachelors' degree programmes in estate management based on the students' subject background and application. The subjects' backgrounds are the independent variables and comprise three groups of students:

(1) science students ($M = 1.70$, SD $= 0.463$, $n = 63$);

(2) art students ($M = 1.71$, SD $= 0.462$, $n = 34$); and

(3) commercial students ($M = 1.62$, SD $= 0.495$, $n = 24$).

Commercial students have the lowest mean of 1.62 ($n = 24$) in the application for direct entry into the university. This implies that this group of students would apply for admission into

Table V.
Test of homogeneity of variances

Levene Statistics	df1	df2	Sig.
0.781	2	118	0.460

Table VI.
Descriptive comparison of application for university admission means

					95% Confidence Interval for Mean			
	n	Mean	SD	SE	Lower bound	Upper bound	Minimum	Maximum
Science	63	1.70	0.463	0.058	1.58	1.81	1	2
Arts	34	1.71	0.462	0.079	1.54	1.87	1	2
Commercial	24	1.62	0.495	0.101	1.42	1.83	1	2
Total	121	1.69	0.466	0.042	1.60	1.77	1	2

the undergraduate programme in estate management in FUTA. This is followed by science students with a mean of 1.70 ($n = 63$) and Art students with a mean application of 1.62 ($n = 24$). The standard deviation is less than 0.5 across the three groups of students. This shows that the data are concentrated around the mean. The standard errors across the three groups of respondents are lower than 0.2. This implies that the sample is a reliable representation of the total population.

The ANOVA was not significant as shown by the analysis in Table VII, F (2, 118) = 0.256, $p = 0.78$. The focus is on F-value (0.256) which is less than the minimum value (0.05) needed to establish a significant difference. The F-ratio (0.256) is not significant ($p = 0.775$) at the 0.05 alpha level. Also, the sig value (0.775) shows that the difference will happen in 77.5 per cent at a time. Thus, there is no significant evidence to reject the null hypothesis and conclude that there is no significant difference between students' applications for a Bachelor degree programme based on their backgrounds in "O" level subjects. However, the actual difference in the mean score is quite minimal based on Cohen's convention for interpreting effect size.

The result from the ANOVA in Table VII is an omnibus test. It does not show the specific groups that differ from one another. Hence, the study followed the analysis with a post hoc test at 0.05 alpha using Tukey HSD test, since equal variance was obtained. The mean difference is less than 1 between the three groups. The sig. values are greater than the maximum value (0.05) that is required to confirm a significant difference among the variables (see Table VIII). Also, 0 falls between the values of the confidence interval at the lower and upper bounds. Consequently, the result revealed no significant pairwise difference between the mean applications for University admission among Science and Art students. The same result was also obtained on pairwise comparison of the mean score of students with science and commercial background as well as science and art.

The results of the ANOVA and the Post hoc test show no significant difference in the mean application for admission among the three groups of students. The mean plot in Figure 2 provides information on the group of students that would be most affected by a compulsory pass in physics. The graph shows that more students with a background in Art subjects would apply for undergraduate admission into estate

Table VII. ANOVA of application for university direct entry admission

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.112	2	0.056	0.256	0.775
Within Groups	25.954	118	0.220		
Total	26.066	120			

Table VIII. Tukey HSD of application for university direct entry admission

(I) class of secondary school	(J) class of secondary school	Mean Difference (I-J)	SE	Sig.	95% Confidence Interval Lower bound	95% Confidence Interval Upper bound
Science	Arts	−0.007	0.100	0.997	−0.24	0.23
	Commercial	0.073	0.112	0.791	−0.19	0.34
Arts	Science	0.007	0.100	0.997	−0.23	0.24
	Commercial	0.081	0.125	0.794	−0.22	0.38
Commercial	Science	−0.073	0.112	0.791	−0.34	0.19
	Art	−0.81	0.125	0.794	−0.38	0.22

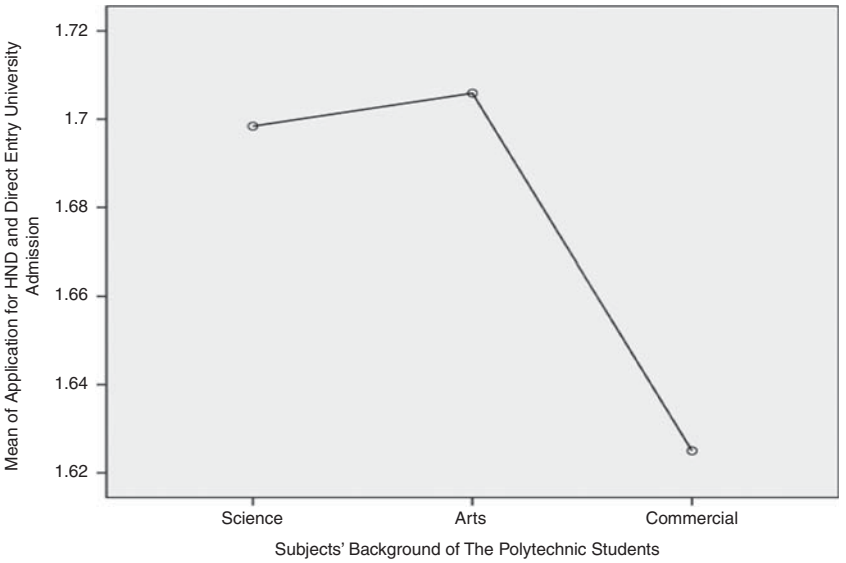

Figure 2.
Mean plot of S.S.C.E. subjects' background of polytechnic students applying for university admission

management than students with background in science and commercial subjects. This implies that most Art students would be denied admission compared with commercial and science students.

6. Conclusion

This study examined an important aspect of real estate education that had been neglected for many years in Nigeria. It focused on the impact of a compulsory pass in physics as a requirement for admission and the requisite job skill of a graduate. Previous scholarly publications established that there are challenges on the expected skill of a graduate from employers' point of view. Findings from this study show that there is no connection between physics, the expected skill and learning outcome of a graduate of estate management. A majority of the undergraduate students with a pass in physics avoided it as an elective course in their First year. This reduces the rationale behind a compulsory pass in the subject for admission into estate management programme to a subjective question. A compulsory requirement for a pass in physics for admission creates a major stumbling block to prospective students of Estate management and obstructs career progression of direct entry students with diploma certificates from the Polytechnics. The lack of significant difference in the mean application for direct entry admission among Art, commercial and Science students in the Polytechnics attests to this. In compliance with the best practice of admission requirements, this study recommends uniform "O" level subject requirements for admission into estate management programmes in Nigerian universities and polytechnics. Physics should be considered as an optional requirement among other relevant subjects. The course curriculum and the expected learning outcome should be used as guides to set the subjects required for admission into estate management programmes. This must be correctly spelt out in the prospectus and other printed forms for proper awareness of the prospective students. This would enhance the mobility of students from the polytechnics to the universities. In line with global best practice, this study calls for generic subject requirements for admission into real estate programmes in universities and polytechnics in Nigeria.

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Appendix 1. Questionnaire to the polytechnic students

Dear respondent,

This questionnaire has been prepared carefully and structured to collect data for a research titled "Admission into Real Estate Undergraduate Education in Nigeria Universities; the Clog in the wheel". The research is solely for academic purpose and all information given and obtained will be treated with strict confidentiality and used for the purpose of the study only. Kindly tick your answer in the available options and fill the blank spaces where necessary. I therefore crave your indulgence and kind cooperation in completing the questionnaire.

Regards,

Dr. S.P. AKINBOGUN

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Name of school.....

2. Gender: (a) Male ( ) (b) Female ( )

3. Age of Respondent: (a) 14-19 years ( ) (b) 20-24 years ( ) (c) 25 years and above ( )

4. Educational Status: (a) Undergraduate ( ) (b) Graduate ( ) (c) Postgraduate ( )

5. Which class were you in secondary school?

(a) Science Class ( ) (b) Art Class ( ) (c) Commercial Class ( )

SECTION B:

6. Which level are you?

a) ND1 ( ) b) ND2 ( )

7. Did you do physics in your O'level examination? Yes ( ) No ( )

8. Based on the ratings below, kindly state your grade in the under-listed subject to answer:

SUBJECT	Distinctio	Credit	Pass	Fail	Not Willing To
PHYSICS					

9. As ND student which would you apply for?

a) HND ( ) b) BSc ( )

10. Select the University

a) Covenant University (CU) ( )
b) Obafemi Awolowo University (OAU) ( )
c) University Of Lagos (UNILAG) ( )
d) Federal University of Technology Akure (FUTA) ( )
e) BELLS University ( )
f) CRESCENT University ( )
g) University of Osun (UNIOSUN) ( )
h) Joseph Ayo Babalola University (JABU) ( )

Appendix 2. Questionnaire to the university students

SECTION A:

1. Name of school.....

2. What subjects do u offered in your O'level? …….....

……

……

3. What subjects do u offered in Jamb? .....

……

……

4. What was your score in Jamb? .....

5. Did you write the post UTME before given admission?

Yes ( ) No ( )

6. What were minimum O'level requirement requested from u before gaining admission?

a. 3 credit passes ( ) b. 4 credit passes ( ) c. 5 credit passes ( ) d. 6 credit passes ( )

7. What subjects are these requirements: please specify

……

…….....

Section B: Impact of admission requirements on intake of direct entry students. (this section is strictly for direct entry students).

8. What was your initial qualification? ND ( ) HND ( )

12. Minimum requirement requested from you before gaining admission into d University?

a. Pass ( ) b. lower credit ( ) c. upper credit ( ) d. distinction ( )

13. Does the minimum O'level subjects required from you before gaining admission into Estate Management in your first institution in any way differ from that which was required from you before gaining admission into Estate Management in the University?

Yes ( ) No ( )

14. Are these differences in requirement in anyway impacted your study so far?

Yes ( ) No ( )

15. Do you think Estate management as a course should b specialized to science students alone? Yes ( ) No ( )

Section C: Impact of the admission requirement on the skill acquired and employability of graduate of estate management

17. Have you gone for Students Industrial Work Scheme Experience in an Estate Firm?

Yes ( ) No ( )

18. Does Physics as a subject have a positive impact on your performance and the skill required in the field of work?

Yes ( ) No ( )

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