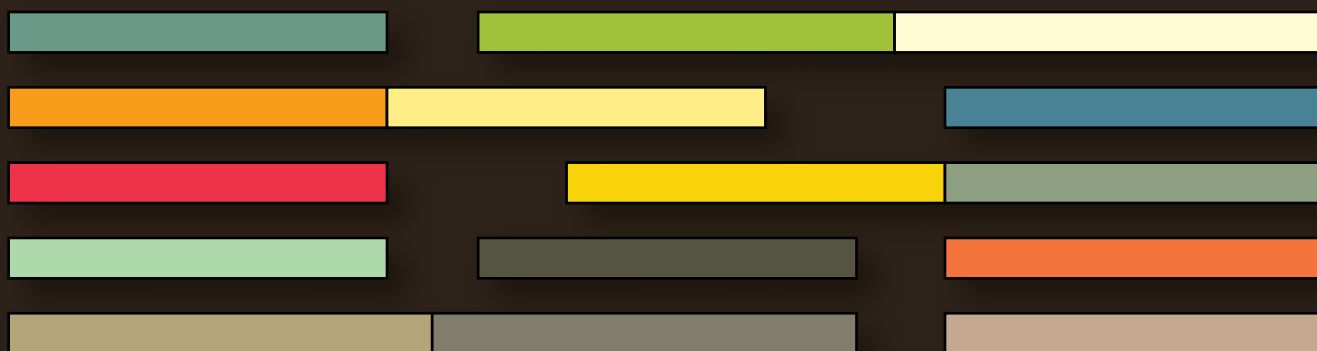


# EDULEARN<sup>17</sup>

**9TH INTERNATIONAL CONFERENCE  
ON EDUCATION AND NEW LEARNING  
TECHNOLOGIES**

**BARCELONA (SPAIN)  
3RD - 5TH OF JULY, 2017**



# CONFERENCE PROCEEDINGS



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Coding & Programming in Schools  
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MOOCs: Massive Open Online Courses (2)  
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Serious and Educational Games (2)  
Virtual Reality Experiences  
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STEM in Higher Education  
21st Century Skills  
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Computer Science Education  
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Technology Enhanced Learning (1)  
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### POSTER SESSIONS, 3rd July 2017

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## ORAL SESSIONS, 4th July 2017

e-Learning & b-Learning Experiences  
Assessment of Student Learning (1)  
Online Collaborative Learning  
Technology Enhanced Learning (2)  
Exchange & International Programmes  
Gender Issues  
Links between Education and Research  
Student Support in Education  
Professional Development of Teachers (2)  
New Trends in Post-graduate Education

Blended Learning  
Assessment of Student Learning (2)  
Project Based Learning  
Web Technologies in Education  
International Projects  
Multicultural Education  
Tutoring and Coaching  
Special Education (1)  
Pre-service and In-service Teacher Experiences (1)  
New Trends and Experiences in Business Education

Flipped Learning  
Assessment of Student Learning (3)  
Collaborative Learning Technologies  
Apps & Mobile Technologies  
Pedagogical Innovations (1)  
Intercultural Competences  
Curriculum Design  
Special Education (2)  
Pre-service and In-service Teacher Experiences (2)  
Museums & Cultural Heritage Learning

e-Learning Projects and Experiences (1)  
Learning Management Systems  
Collaborative Learning Experiences  
Emerging Technologies in Education (1)  
Pedagogical Innovations (2)  
Language Learning Innovations  
New Trends and Experiences in Physics Education  
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Pre-service and In-service Teacher Experiences (3)  
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e-Content Management and Development  
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Educational Trends & Best Practices (2)  
Technology in EFL Learning  
Educational Management  
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## VIRTUAL SESSIONS

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Barriers to Learning  
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International Projects  
Language Learning Innovations  
Leadership in 21st Century Education  
Learning and Teaching Methodologies  
Learning Experiences in Higher and Further Education  
Learning Experiences in Preschool Education  
Learning Experiences in Primary and Secondary Education  
Lifelong Learning  
Links between Education and Research  
Massive Open Online Courses (MOOCs)  
Mobile and Tablet Technologies  
Multicultural Education  
New Learning/Teaching Models  
New projects and Innovations  
Online/Virtual Laboratories  
Pedagogical Innovations in Education  
Pre-service and In-service Teacher Experiences  
Research Methodologies  
Special Education  
STEM in Education  
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# GENDER ATTRITION RATE DIFFERENCES AMONG ESTATE MANAGEMENT STUDENTS OF UNIVERSITIES WITHIN SOUTH-WEST NIGERIA

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## Abstract

Most sciences and science-related disciplines, popularly known as Science, Technology, Engineering and Mathematics (STEM) and professions are largely oriented towards the male student, staffs and employees. Females are under-represented at every level of activity both in the study and in the employment [1]. The purpose of the study is to examine the gender attrition rate differences among Estate Management students of Universities within South-West, Nigeria being one of the fields within the STEM range of discipline scope since it has a scientific focus. The enrolment and graduation list of the students was used to determine the attrition rate of Estate Management student by gender. This is for a period of five (5) years garnered from three universities in South-West Nigeria namely: Obafemi Awolowo University, Ile-Ife, University of Lagos, Akoka and Covenant University, Ota. These Universities fall within the group of universities that have produced reasonable number of graduates over time, up to ten sets of graduates over the period 2007 and 2016. However, this study will only consider five sets due to constraints in assessing the needed data. The study applied quantitative data using descriptive statistics such as tables, percentages and mean. The findings are in correspondence with what obtains in literature [2] that female student's attrition is higher in fields that are male-dominated. Since Estate Management is male dominated (as seen from the figures), the attrition rate of females is more in the universities sampled. A useful recommendation for the study was provided.

Keywords: Gender, Attrition Rate, Estate Management, Graduates.

## 1 INTRODUCTION

Across the world, gender roles distinction seems to exist which has created access to differences in the opportunities available to men and women. The imbalance in the opportunities between the men and women is what is often referred to as gender inequality in gender studies. There seems to exist a wide gap between male and female in the different endeavours of life including education and occupation. This gender disparity appears to be very visible in education which is mirrored not only at enrolment but also at graduation from all levels and types of education, across various disciplines and programmes, particularly Sciences, Technology, Engineering and Mathematics (STEM) disciplines of which Estate Management is one [3].

Generally in the education sector, the number of females that are educated appears to be very low. [4] opined that many challenging factors confront the female students especially as they go up the ladder of education which results in their gradual reduction in number. [5] commented on the attrition rate of female students in Federal Capital Territory, Nigeria and in the Northern States of the country that their enrolment and graduation rate is very poor due to age-long religious and cultural belief. The 2005 National School Census showed that there exist a wide margin in the gender disparity between the Southern and Northern Nigerian schools which can partly be attributed to the underlying socio-cultural factors that is prevalent in the North [6]. It then means that one can conclude that higher education is still a sector with female under-representation.

The females that make it up to higher education are often confronted with challenges of not being able to excel academically which even result in their high attrition rate in higher education [7]. This disparity between the males and females in higher education also has lifelong effect on the privileges and opportunities that are open to the females such as participating in political positions, economic and social privileges. This is because obtaining a higher education is the pathway to being able to compete for some of these privileges and opportunities [4].

There now seems to be the awareness that increased female participation in higher education is mostly important in this age of globalization. Higher education appears to be the only platform for empowering women with the necessary knowledge and skills needed to earn a better income and live a better life in this world [8]. This is now evident in increased enrolment rate of females in schools even at tertiary level up to the point of parity as well as increased graduation rate of females from higher institutions as has been accounted for in some studies such as [9], [10] and [11]. It is against this background that this study seeks to examine the current position as regards attrition rate of males and females in higher education. To which side is the coin tilted in Estate Management programme of Universities in South-West Nigeria? Therefore the aim of the study is to examine the gender differences in the attrition rate of estate management graduates in South –West Nigerian Universities over five academic sessions.

## **2 LITERATURE REVIEW**

### **2.1 Student Attrition in Higher Education**

Student attrition can be regarded as the situation where a student leaves higher education without completing the program or where there is delay in completing a study program. [12] referred to attrition as the proportion of students who are not able to graduate nor continue in their study in the following academic year. [9] opined that student attrition should be considered from an institutional level and not from the perspective of a particular program or course. Some of the various terms often used to refer to attrition in higher education includes: dropout, non-completion, withdrawal and discontinuance [13]. The different ways students withdraw from colleges and universities have been highlighted by [14] and these are: students that leave on their own volition, students that inform the institution before leaving, students who are mandated by the institution to leave, students who do not return to continue their study in the following academic year, students who defer their study program and those who transfer to another institution to continue their studies. In this study, attrition rate will compare the difference between enrolment and graduation –that is, how many students entered in a particular year and how many completed the study program. It would have been better to include the students that enter say in the second year of the program and those that leave before completing the study program but access to such data is not readily available in the selected institutions.

Student's attrition in higher education is based on many factors and circumstances that confront the students in the course of their study. Some of the circumstances that could result in attrition in higher education studies include: student academic outcome, student's motivation in higher education, student personal /family challenges with finance, age, ethnicity; classroom dynamics, student –faculty relationship, amongst others. An in depth study of these factors will help clarify the situations and circumstances that trigger student attrition in the higher education sector.

### **2.2 Factors Responsible for Student Attrition in Higher Education**

Students' academic performance is one factor that has been identified as influencing attrition in higher education. It does not only have the negative side of resulting in student dropout but also helps in generating the best hands that will lead the nation and manage the nation's resources and wealth [15]. Students' performance is determined by various factors that vary from place to place and from person to person such as family education background, gender difference, socio-economic factor, teacher's level of education and style of teaching, class environment amongst others [16]. Attrition in higher institutions has been observed to occur after the examinations when students do not pass some exams [14]. Concerning gender differences in academic performance, [8] noted that the attrition rates due to academic performance of men are higher but not in every course program especially in the developed nations of the world and in OECD nations. [3] opined otherwise that academic performance of males and females appears to be the same except in courses where females are a minority. In such courses women tend to perform below the men and their attrition rate appears to be more than that of the men. Therefore, one can conclude that women tend to progress better in courses that are female – dominated [2].

Students' disposition to higher education is another factor that can determine whether they will stay and graduate from the institution. Students' indecision and unpreparedness about their expectations of higher education and its relevance to their professional pursuit or personal plans could result attrition [4]. In addition, lack of personal and meaningful social relationship with members of the institution could also result in disconnection or marginalization and eventually attrition of students in higher

education [11]. There is need for student to embrace the idea of interacting with other students, interactions with faculties and staffs of their institution all through their stay in higher institution.

Aspiration according to [17] can influence also attrition in both academics and career of individuals. Aspiration which connotes a strong desire, longing, or ambition can be largely grouped into two which are academic and career aspiration. Extant studies have shown that various factors influences individuals' aspiration such as gender, academic experiences, socio-economic, parents, ethnicity, educational background other socio-cultural factors [17], [18]. It is difficult to separate a student's academic performance and achievement from her/his academic aspirations as the aspirations serve as motivation for achievement.

[19] pointed out that teaching and learning approach impacts on students differently which can have negative impact in some students even to the point of attrition. Students are seen to be inspired differently, to react differently to specific classroom environments and instructional practices. It then means that teachers / faculties need to understand the differences to be able to satisfy their students' learning needs. Students' learning environment also influences students' educational experiences either positively or negatively [20]. Student attrition rates has been observed to be higher in distance learning education and e-learning (web based education) programmes than the traditional system where students can sit and interact with their tutor (Phipps and Merisotis, 1999).

### **2.3 Gender Attrition in Higher Education**

There are real consequences of gender expectations in every society. The expected behaviours, styles of dress, choice of language, and acceptable forms of expression are evident in every classroom at all levels from preschool to doctoral programs [3]. According to [1] the gender behaviour displayed by girls such as being socialized to behave dutifully and follow teacher's orders has enabled them to do well in school. Males on the contrary are often expected to challenge authority which can be detrimental to their academic experience [2].

Beginning from primary education all through higher education, studies have shown that females lag behind males in mathematics, and some other science related subjects like physics, chemistry; this is despite having higher grades in other courses. Male students are disadvantaged in reading, writing and overall attainment, with males having higher dropout rates in higher education [5], [3], [2]. The study carried out by [21] on African American male students in USA showed that some male students fully acknowledge that women are outperforming men in higher education. [22] also noted in her work on African American males that male students face virtual exclusion from the social institution of education. The educational institution has become a place where the men often face failure, and alienation. Their entire academic careers are riddled with concern and low achievement when compared to their female counterparts [21].

[23] discussed women's experience in Ethiopia. The author noted that women account for the larger proportion of dismissals than enrolment in higher institutions in Ethiopia. From the study, it was observed that at least two women were dismissed for every ten women enrolled in the regular program. [10] who carried out a qualitative research into the reasons why students drop out after the first year of their programme in University College, Dublin commented on the research done on three Institutes of Technology which seemed to have shown a result that is contrary with a higher percentage of male attrition from the institutes. Studies in the UK have also shown that males had a higher tendency to drop out early from school ([2], [1]). Similarly, [9] found out from the data garnered from higher education in Australia that females often do not experience delay in their studies and are more likely than the males to successfully complete their study program. The differences in the rate of attrition is appearing to be based on location or regions of the world and not only on institutions.

### **2.4 Estate Management as STEM Field**

STEM covers a wide range of subject that falls into each of the terms which represents Science, Technology, Engineering, and Mathematics range of disciplines. Some of the common STEM fields include: Physical, Biological Sciences, Engineering and Technology related fields, Mathematics, Computer Sciences, also fields in the Medical areas, Architecture/Building and other fields in the built environment, Psychology and Geography as well as other fields with a scientific focus can all be regarded as within the STEM range of discipline scope. One can simply conclude that that STEM fields affect virtually every aspect of life.

Estate Management is one of the fields in the built environment with a scientific focus as such is a STEM field. Estate management is a multidisciplinary course that provides a comprehensive basis of the knowledge of land and buildings. Estate management is a course that helps to improve students' ability in applying their analytical skills in providing solution to the theoretical and practical land resource problems. The main thrust of estate management is: feasibility and viability appraisals, real estate valuation and appraisals, landed property investment and facility management, land use planning and development, project management, amongst others. It is centred on land resource management. It shares many characteristics with other STEM fields such as female under-representation and high female attrition rate (Turrell, Wilkinson, Astle and Yeo, 2002).

### 3 METHODOLOGY

The student records from the selected universities was used in showing the enrolment and graduation details of the students of the selected universities from which the attrition rate of attrition was determined. The results are displayed in the table below.

*Table 1. Enrolment Rate of Estate Management Students by Gender*

UNIVERSITIES	OAU		UNILAG		CU	
	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
2007/2008	55 (68.8)	25 (31.3)	31 (64.6)	17 (35.4)	32 (64.0)	18 (36.0)
2008/2009	46 (54.1)	39 (45.9)	49 (66.2)	25 (33.8)	32 (59.3)	22 (40.7)
2009/2010	65 (55.6)	52 (44.4)	48 (64.9)	26 (35.1)	23 (52.3)	21 (47.7)
2010/2011	50 (59.5)	34 (40.5)	44 (62.9)	26 (37.1)	26 (63.4)	15 (36.6)
2011/2012	57 (55.9)	45 (44.1)	56 (50.5)	55 (49.5)	18 (56.3)	14 (48.8)
<b>TOTAL</b>	<b>273 (58.3)</b>	<b>195 (41.7)</b>	<b>228 (60.7)</b>	<b>149 (39.3)</b>	<b>131 (59.3)</b>	<b>90 (40.7)</b>

Table 1 shows the enrolment figures for the selected institutions which are Obafemi Awolowo University, Ife (OAU), University of Lagos, Akoka (UNILAG), Covenant University, Ota (CU) for five academic sessions ranging from 2007/2008 academic session to 2011/2012 academic session. The enrolment record of OAU for the five sessions shows that a total of 273 (58.3%) male students enrolled while a total of 195 (41.7%) female students enrolled over the period. This shows a higher enrolment rate among the male students. This is in agreement with [8] [9] [23] which stated that in STEM fields of which Estate Management is one, there is the peculiarity of male dominance in such fields. The record of UNILAG, shows a similar pattern with a total male enrolment rate of 228 (60.7%) and a total female enrolment rate of 149 (39.3%) while the enrolment pattern for CU over the five academic sessions is also not out of place as the figures shows a total of 131 (59.3%) for the male students and 90 (40.7%) for the female students.

*Table 2. Graduation Rate of Estate Management Students by Gender*

UNIVERSITIES	OAU		UNILAG		CU	
	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
2011/2012	50 (74.6)	17 (25.4)	28 (68.3)	13 (31.7)	22 (55.0)	18 (45.0)
2012/2013	43 (58.1)	31 (41.9)	43 (78.2)	12 (21.8)	24 (53.3)	21 (46.7)
2013/2014	60 (57.1)	45 (42.9)	42 (73.7)	15 (26.3)	17 (44.7)	21 (55.3)
2014/2015	46 (63.0)	27 (37.0)	39 (68.4)	18 (31.6)	21 (58.3)	15 (41.7)
2015/2016	55 (61.8)	34 (38.2)	51 (51.5)	48 (48.5)	15 (51.7)	14 (48.3)
<b>TOTAL</b>	<b>254 (62.3)</b>	<b>154 (37.7)</b>	<b>203 (65.7)</b>	<b>106 (34.3)</b>	<b>99 (52.7)</b>	<b>89 (47.3)</b>

The graduation rate for the three universities across the five academic sessions ranging from 2011/2012 to 2015/2016 sessions seem to follow a similar trend with the enrolment pattern as shown above with more participation rate from the male students as against the females. The figures for OAU

shows a total graduation rate of 254 (62.3%) while that of the female students stands at 154 (37.7%). This can be attributed to the larger number of the males which is also showing in the number graduating from the universities under review. The figures for UNILAG and CU are not different from that of OAU with 203 (65.7%) and 106 (34.3%) male and female graduation rate in UNILAG and 99 (52.7%) and 89 (47.3%) as the graduation rate for the male and the female students of CU respectively.

*Table 3. Attrition Rate of Estate Management Students by Gender*

UNIVERSITIES	OAU		UNILAG		CU	
	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
2007/08 - 2011/2012	5 (38.5)	8 (61.5)	3 (42.9)	4 (57.1)	10 (100)	0 (0)
2008/2009 - 2012/2013	3 (27.3)	8 (72.7)	6 (31.5)	13 (68.4)	8 (88.9)	1 (11.1)
2009/2010 - 2013/2014	5 (41.7)	7 (58.3)	6 (35.3)	11 (64.7)	6 (100)	0 (0)
2010/2011 - 2014/2015	4 (36.4)	7 (63.6)	5 (38.5)	8 (61.5)	5 (100)	0 (0)
2011/2012 – 2015/2016	2 (15.4)	11 (84.6)	5 (41.7)	7 (58.3)	3 (100)	0 (0)
<b>TOTAL</b>	<b>19 (31.6)</b>	<b>41 (68.3)</b>	<b>25 (36.8)</b>	<b>43 (63.2)</b>	<b>32 (97.0)</b>	<b>1 (3.0)</b>

The attrition rate, was drawn from the enrolment and graduation table of the three universities selected for the study. It can be seen that in OAU, out of the 273 male students that enrolled across the five academic sessions, 254 (graduated of which 19 did not graduate which is 31.6 percent attrition rate for the male students. For the female students, the data shows that out of the total of 195 students that enrolled for the five sessions, 154 graduated leaving out 41 students that fell by the way consisting of 68.3 percent attrition rate. This figure is higher than that of the males. This appears to be in correspondence with Severiens and Dam (2012) that stated that the attrition rate of females are higher than that of the male students in higher education especially in fields that are male-dominated such as STEM fields of which Estate Management is one. The data for UNILAG equally shows that of the 228 male students that enrolled for the five sessions, 203 graduated while 25 dropped out consisting of 36.8 percent attrition rate while the data for the female students shows that out of a total of 149 students that enrolled, 106 students graduated meaning that 43 students dropped out which is 63.2 percent attrition rate which is also higher than the attrition rate of the male students in that university. This simply shows that the general perception of higher attrition rate for the females also holds true for UNILAG also. The information on CU shows a different trend from the other two universities. The total enrolment rate for the male students over the five academic sessions shows that out of the 131 male students that enrolled, 99 graduated while 32 dropped out which is 97.0 percent attrition rate. For the female students, while 90 students enrolled, 89 graduated with only 1 female student being left behind which is 3.0 percent attrition rate. This is contrary to the norm of higher female attrition rate in higher institution especially in specialized field like STEM fields. In CU, it has been observed that the females outperform the male students and they tend to graduate more than the males. This is obvious as it can be seen from the figures above. This is in correspondence with [13] [14] [19].

#### **4 CONCLUSION AND RECOMMENDATION**

There is need to critically address the factors influencing the participation and graduation rate of female students in STEM fields especially of which Estate Management is one. This is vital considering the importance of STEM fields in the advancement of nations of which most STEM fields across the globe is currently being challenged with low participation rate and high attrition rate especially of female students.

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