

*Full Length Research Paper*

# **Analysis of students attrition in the sciences subjects areas in Ambrose Alli University, Ekpoma**

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The study, analysis of student's attrition in Ambrose Alli University (AAU) Ekpoma Nigeria was carried out to determine the exact number of students who attrite from selected faculties of the university. The study employed the descriptive survey design. Three hypotheses were stated and tested. On the hypothesis which tested the general attrition rate of students, in the 3 faculties the result reveals that attrition mean rate of 44.48%. On the hypothesis which tested the course of study with higher rate of attrition, the study reveals that the faculty of education has the highest rate of students' attrition with attrition rate of 67.65% as against other faculties. On the hypothesis which tested the general rating of factors predisposing students to attrite, the result revealed that family socio economy was rated 1st; followed by lecturer's victimization 2nd; low grade point average (GPA) 4th; cult activities rated 5th; and others 6 to 9th. On the hypothesis which tested the male and female rating of attrition, the result reveals that male and female students perceived the factors differently, for example the male students rated low GPA as number one factor while the female students rated lecturer's victimization as number one factor.

**Key word:** Analysis, students, attrition, school, higher institution.

## **INTRODUCTION**

Efficiency is measured by the simple definition of input equaling output. The increase in higher institution in Nigeria has come to stay with the advent of democracy in 1999. Today the total number of higher institution in Edo state, made up of private and public schools have risen from 4 to 12 with an astronomical increase in student's entry into faculties of learning. Attrition of students in many higher institution of learning is a silent cancer affecting a segment of the students unnoticed. A careful comparison of the number of students admitted within a year and the number graduating after spending the required numbers of years in the various departments of all faculties in higher institutions give only the careful observer the indications of the danger of the implications of attrition on the psyche of the individual affected on the In some of the developed countries of the world that is, United States of America (USA) and Europe, the cause of

society.

Student's attrition have been identified to include the following: Family socio- economic, students intelligent peer influence, lecturer's victimization, lack of will power for academic work. These factors affect the population of students differently and hence their rating.

## **Statement of the problem**

According to Aluede and Ikechukwu (2004), the following factors; financial, home societal values and personal characteristic of the adolescents predispose students to drop out of school. The study further noted that peer influence do not predisposes adolescent to drop out of school. In a study carried out in the USA national centre for education statistic (NCES) by Campbell (2003), short term enrolment in post secondary education, student's background and institutional differences were reasons for early departure from school from 1996 to 1998.

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analysis study reveals the following findings: Nearly one-third of the students (amounting to 31.7%) during the period of 1995 to 1996 beginning post secondary schools left without a degree or credential. Students in a 2 year public institution that is, polytechnic were much more likely to attrite than those in public 4 years university program without obtaining a degree amounting to 43.6 versus 18.8%. The study also reveals that students with low grade point averages (GPAs) less than 2.75 in a 2 and 4 program representing 25.88% versus 11.3% were more likely to leave school. Race/ethnicity was also identified as a factor associated with attrition, students who are fulltime worker had a higher attrition than those who work part time. Female students who left were less than male students who leave for academic reason.

The study of Wylie (2004) reveals that attrition rates in the United States (US) College and university have continued to remain consistently high. Among the factors identified to be responsible for this were demographic, background and personal circumstance variable, referred to as the theoretical model of non-traditional student's attrition that is between the age of 25 and 60 working as part/full time capacity. According to Tinto (1982), after more than 80 years of attrition research in higher education in the US and despite the investment of billion of dollars in educational program designed to enhance the likelihood that individual would enter and persist within the higher education system, students completion ratio have remained constant at around 45%.

In the study of Pantages and Creedon (1978) in every 10 students who enter a 4 year college course in the USA only 4 will graduate from that college 4 years later. In support of this, the Tinto and Beam attrition theory model postulated that successful academic and social integration of the students into the higher education institution determines persistence behavior.

The probe of this study therefore is to determine the rate of attrition in the 3 faculties and the rating of all factors identified in this study to predispose students to attrite in Ambrose Alli University (AAU), Ekpoma, Edo State.

### **Purpose of the study**

The rate of student's attrition in Ambrose Alli University is intended to compare the number of students admitted and those graduating at the expiration of the duration of their course of study in 3 faculties namely: Natural science; engineering and technology; and education, to determine the percentage rate of student's attrition. The study also intends to determine the rating of students on the various factors earlier identified by other researchers which are likely to cause more attrition.

### **Significance of the study**

The achievement of efficiency is a task any organization/

institution will like to achieve. The findings from this study will help the school management appreciate the problem of attrition and will also provide data that will act as spring board for further studies. The opinions of students on the causes of attrition will help the school management device ways of ameliorating the problem to its barest minimum.

### **Research questions**

- 1) What is the attrition rate of students in the three faculties identified?
- 2) What faculties have the highest attrition rate?
- 3) What factors do students perceived mostly caused attrition, in the three faculties?

### **Hypotheses**

- 1) Attrition rate is not significantly high.
- 2) The rate of attrition is not significantly different across the three faculties.
- 3) There was no significant difference in the rating of the factors identified to be responsible for students' attrition.

### **METHODOLOGY**

The study employed the causal comparative analysis to establish the rate of attrition. The population of the study is made up of 5376 students from the three faculties' namely Natural Science; Engineering and Technology; and Education. The entire population was purposively used as sample size.

### **RESULTS**

Table 1 shows the total number of students admitted for the year 1996/1997, 1997/1998 and 1998/1999 and those graduating after the duration of four year course for those in natural science and education and five years for those in engineering and technology. In natural sciences out of 761 students admitted only 484 graduated. In 1997/1998 a total number of 769 was admitted out of which only 539 graduated. In 1998/1999 a total number of 990 students were admitted out of which only 610 graduated.

In the faculty of engineering and technology a total number of 283 students were admitted in 1996/1997 out of which only 223 students graduated at the normal graduation year. In 1997/1998 a total of 401 students were admitted out of which only 279 graduated. Also in 1998/1999 out of 590 students admitted only 507 students graduated. In the faculty of education in 1996/1997 admission year 434 students were admitted out of which only 218 graduated. There was no admission in 1997/1998 admission year however 549 students graduated. In 1998/1999 1500 students were admitted out of which only 217 graduated.

**Table 1.** Number of students admitted and number graduating after duration of study.

Faculties	Number of students admitted			Number of students graduating after duration of study		
	1996/1997	1997/1998	1998/1999	2001/2002	2003/2004	2004/2005
Natural science	761	769	990	484	539	610
Engineering and technology	283	401	590	223	279	507
Education	434	-	1500	218	549	217
Total	1478	1170	3080	925	1367	1334

Table 2 shows the percentage attrition rate of students by year and in three faculties as follows; general attrition rate 44.48% attrition of students in natural science is 43.79%. In engineering and technology attrition of students is 22.01 and in education attrition of students is 67.65%. The mean average of general attrition rate is 44.48 %

Table 3 shows that family socio-economy is rated number one factor followed by lecturer's victimization. Undue delay in verifying students' certificates at point of entry, low GPA and opportunities to travel abroad was rated same (third). Lack of the will power to pursue academic work was rated 4th and missing results rated 5th. Student intelligence, fulltime work and inability to see previous semesters result were rated 6, 7 and 9th, respectively.

Table 4 shows male and female rating of factors predisposing attrition was carried out. Male rated low GPA 1st, while family socio economy, full time work and cults activities were rated same (2nd), students intelligence, undue delay in verifying result at point of entry were rated 3rd, lecturers victimization, ethnicity and opportunities to travel abroad was rated 4th while the inability to see previous semesters result was rated 5th and lack of will power, death due to sickness and missing result were rated 6th. Female students rated lecturers' victimization 1st and family socio economy as 2nd. Opportunity to travel abroad and death resulting from illness and accidents were rated 3rd while missing result undue delay in verifying student's results rated 4th. Low GPA was rated 5th and cult activities was rated 6th, lack of the will power to continue academic work, fulltime work and inability to see previous result before other examinations were rated 7, 8 and 9th, respectively.

## DISCUSSION

On the hypothesis which tested the general attrition rate of students, in the 3 faculties the result reveals that attrition rate is 44.48%. This result is higher than the findings of Campbell (2003) whose study revealed 31.7% for students in 1995 to 1996 and showed a closely relationship to the findings of Tinto (1982) of 45% attrition rate.

On the hypothesis which tested the course of study with higher rate of attrition, the study reveals that the faculty of education has the highest rate of students' attrition with attrition rate of 67.65% as against other faculties under study of 43.79 and 22.01%.

On the hypothesis which tested the general rating of factors predisposing students to attrite, the result reveals that family socio economy was rated 1st followed by lecturer's victimization 2nd and low GPA 4th and cult activities rated 5th and others 6th to 9th.

On the hypothesis which tested the male and female rating of attrition, the result reveals that male and female students perceived the factors differently for example the male students rated low GPA as number one factor while the female students rated lecturers victimization as number one factor. To this Kacen (1998) and Woodruffe (1997) have noted that individuals are likely to engage in negative emotions during life status changes like undergraduate level. As the college students experiences transitions evolving from adolescents to adults, they engage in behavior that could be termed sexual harassment which leads to them been victimized when they refused to submit to morally depraved lecturers. Both male and female students rated family socio economy as 2<sup>nd</sup>. The role of finances influencing dropping out of students from school was emphasized by Fafunso (1994), Okedara (1986), Onwueme and Ugbor (1994) and Aluede and Ikechukwu (2003). On subsequent factors the male and female students shows differences.

## Conclusion

The purpose of this paper was to examine attrition rate of students in three faculties in Ambrose Alli University, namely science, engineering and education, the results show that attrition is higher in the faculty of education than in science and engineering the male students rated low GPA highest among other factors identified while the female rated lecturers victimization higher than other factors perceived and the students rating of factors that predisposed them to attrite that is, like family socio economy, students intelligence, lecturers victimization, lack of will power to pursue academic work, low GPA, ethnicity/race, fulltime work, undue delay in verification

**Table 2.** Percentage number of students who attrite before graduation between 2001/2002, 2003/2004 and 2004/2005.

Faculty	1996/1997-2001/2002		1997/1998 to 2003/2004		1998/1999 to 2005/2006		Mean graduating	Mean attrite
	Graduating (%)	Attrite (%)	Graduating (%)	Attrite (%)	Graduating (%)	Attrite (%)		
Natural science	36.93	63.07	70.09	29.91	61.61	38.38	56.21	43.79
Engineering and technology	78.80	21.20	69.58	30.42	85.59	14.41	77.99	22.01
Education	50.23	49.76	-	-	14.47	85.53	32.35	67.65
$\sum X =$	165.96	134.03	139.67	60.33	161.67	138.32	166.55	133.45
$\bar{X}$								44.48

Source: Field study.

**Table 3.** General rating of factors predisposing attrition in science subject areas.

Factors predisposing attrition	General rating	
	Score	Rating
Family socio- economy	470	1st
Students intelligence	370	6th
Lecturers victimization	460	2nd
Lack of will power to pursue academic work	350	4th
Low GPA	430	3rd
Ethnicity/race	330	8th
Fulltime work	350	7th
Undue delay in verification of certificates of entry before graduation	430	3rd
Cult activities	410	4th
Death due to sickness	410	4th
Opportunity to travel abroad	430	3rd
Missing results	400	5th

Any value more than 390 is significant and less not significant.

of certificates of entry before graduation cult activities, death due to sickness, opportunity to travel abroad, missing results, in ability to see all results of examinations done before proceeding to the next level

## RECOMMENDATIONS

Based on the findings of the study, the following

recommendations are made:

1. To solve the problem of socio-economic factor as it influences attrition the university should engage the students in ventures that can fetch them money in school. This can be achieved by employing those willing to serve as cleaners in the halls of residence, gardeners, cooks etc.
2. On students intelligence the university should

ensure compulsory continuous assessment of students of students in each semester.

3. A standing committee that will attend to students experiencing lecturer's victimization should be instituted.

4. A counseling office should as a matter of urgency opened to cater for counseling students who are discouraged due to any socio-economy factors.

**Table 4.** Male and Female rating of factors predisposing students to attrite in science subject areas.

Factors predisposing attrition	Male		Female	
	Score	Rating	Score	Rating
Family socio-economy	220	2 <sup>nd</sup>	250	2 <sup>nd</sup>
Students intelligence	210	3 <sup>rd</sup>	160	8 <sup>th</sup>
Lecturers victimization	200	4 <sup>th</sup>	260	1 <sup>st</sup>
Lack of will power to pursue academic work	180	6 <sup>th</sup>	170	7 <sup>th</sup>
Low GPA	230	1 <sup>st</sup>	200	5 <sup>th</sup>
Ethnicity/race	200	4 <sup>th</sup>	130	8 <sup>th</sup>
Fulltime work	220	2 <sup>nd</sup>	130	8 <sup>th</sup>
Undue delay in verification of certificates of entry before graduation	210	3 <sup>rd</sup>	220	4 <sup>th</sup>
Cult activities	220	2 <sup>nd</sup>	190	6 <sup>th</sup>
Death due to sickness	180	6 <sup>th</sup>	230	3 <sup>rd</sup>
Opportunity to travel abroad	200	4 <sup>th</sup>	230	3 <sup>rd</sup>
Missing results	180	6 <sup>th</sup>	220	4 <sup>th</sup>
Inability to see all results of exams done before proceeding to the next level	190	5 <sup>th</sup>	120	9 <sup>th</sup>

Any rating value more than 180 for female is significant and for male any values above 200 is significant.

5. Students having low GPA in one area of study could be counseled to take ancillary courses.

6. There is need for cross cultural experience inschools the university should encourage the admission of other races/ethnic background.

7. Part-time programmes should be encouraged to blossom with full time lecturers who should be free from union activities and encourage business mindedness.

8. Certificates of students should as a matter of urgency be verified only at the point of entry and not delayed to graduation.

9. On no reason should a student who sat for any examination experience missing result without a penalty been paid by the culprit; also the university should ensure that attendance register is filled.

10. All results to examination conducted should be published before any other examination could be conducted in any department/faculty.

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