

Examination Repeats, Semester Deferments and Dropping Out as Contributors of Attrition Rates in Private Universities in Nairobi County Kenya.

Mary Mukami Njoroge
Strathmore University
School of humanities and social sciences
P. O. Box 59857-00200
Nairobi-Kenya
Tel +254 722 521 868
mnjoroge@strathmore.edu (corresponding author)

Dr. Tabitha Wang'eri
Kenyatta University
Department of Educational psychology
P. O. Box 43844-00100
Nairobi-Kenya
Tel: 254-721469243
Email: tabitha.wangeri@gmail.com

Prof. Christine Gichure
Strathmore University
School of humanities and social sciences
P. O. Box 59857-00200
Nairobi-Kenya
Tel +254 722 330 745
Email-cgichure@strathmore.edu

Abstract

The purpose of this study was to investigate student attrition rates in private universities in Nairobi County, Kenya. The study was based on the attribution theory of achievement, motivation, and emotion by Weiner (1985). The study sample consisted of 387 current and 60 students who had dropped out from 13 private universities in Nairobi, Kenya. Data was collected through a paper based questionnaire and in-depth interviews. The study established attrition levels of 37%. The results also showed a negative significant relationship between student faculty interaction and student attrition rate ($p=.03$). Based on the findings of the study and the conclusions made, the study recommended improvements in learning environments in order to ease or eliminate student attrition. The study recommends that university amenities such as lecture halls, libraries, hostels and dining points adhere to ergonomics. In addition, mechanisms for early detection of attrition risk should be put in place and supported by technology to ensure students pursue their studies to completion. A further recommendation was that students should be encouraged to always take a proactive approach to university life which would help them seek faculty and peer support and to use the university environment in a manner that would benefit them thus reducing attrition.

Key words

Examination retakes, attrition, semester deferment, drop-out rate

1.1 Background to the Study

Student attrition presents a major concern for many institutions of higher learning as it either causes delays in degree completion or total dropping out from degree programs that students had enrolled in. Student attrition may be defined within different programs in universities but there is a general agreement that examination repeats/retakes, deferment of semesters and dropping out of university altogether translate into possible psychological anguish for the student, loss of revenue for the institute concerned and shattered dreams for families (Gardner, 2010). Studies on student attrition go as far back as 1975 through a model created by Vincent Tinto who had studied student persistence in higher education. Earlier approaches to understanding attrition such as Johnston (2001) looked at students who had dropped out universities without completing degree programs. Such studies tended to isolate the problem in individual students' conditions or abilities and studying these separately. The view of individual student conditions has undergone changes and modern studies have approached attrition as an integration of several factors among them repeated examinations, (also referred to as examination retakes), deferment of semesters and dropping out of university altogether. The three factors combined result in a degree program taking longer than the prescribed time for universities or by non-attainment of the degree.

While being admitted into a university is a remarkable accomplishment for some students, acquiring a degree is what really matters in higher education. The view expressed by Hagedorn (2005) was that frustrated academic goals result in unmet career aspirations such as poorly paid jobs, diminished prestige, lack of career security, and sometimes fewer work opportunities. Earlier studies on student attrition such as Pascarella (1980) focused on individual student's psychological factors like individual attributes, skills and motivation. This approach changed due to the realization that university environmental factors also played a role in student retention or dropping out (Tinto, 1987). Tinto and colleagues studied the connection between academic and social systems of an institution and the effect they had on individual students. Although research on attrition has convincingly pointed out issues related to attrition, the studies have not yet sufficiently exposed examination retakes, deferment of semesters and dropping out as contributors of student attrition in private universities in Kenya. This research aimed to close this gap through its findings.

Despite the challenge of academic attrition being an object of inquiry for decades in the Western world there are few reported studies in Africa. One such study was conducted in a South African university (Herman, 2011) and it established a 50% attrition rate among postgraduate students giving the indication that attrition is as rampant a problem in Africa as elsewhere. The South African study was done among graduate program leaders who were of the opinion that attrition happened due to students' personal reasons, students' lack of ability, skills or motivation to do a graduate program, students' lack of financial support, poor supervision and an inflexible policy of the universities (Mouton, 2011). These findings seemed to corroborate with studies in American and Canadian universities (Lovitts, 2001; Gardner, 2010; Weiner, 2010) where students' attrition was found to arise from academic, financial and personal reasons. The motivation of the current study was to delve deeper in the multifaceted dimensions of attrition to cover examination retakes, semester deferments and dropping out as contributors to attrition rates.

In emerging economies such as Kenya, education is seen as one of the pillars for attaining prosperity and eradicating poverty as attested by Bunoti (2011). Since Kenyan independence from the British rule in 1963, the system of university education in Kenya has undergone considerable expansion. In the year 2009, there were a total of 7 traditional public universities with 12 newly established university colleges and over 22 private universities with varying levels of accreditation. It was estimated that the country had 122,874 university students in 2008 of which approximately

80% were in public universities (Kenya National Bureau of Statistics, 2009). This number rose to 177,735 in 2009 marking a 44.7% rise (Kenya Human Development Report, 2010). In 2012, the number of universities rose to 33 universities (7 public and 26 private) and 24 university constituent colleges (Mwiria, et al, 2007). This is in addition to a number of public middle level colleges that offered diplomas in certain fields including engineering, education, and computer science. However, the higher education situation in Kenya has drastically changed and as of June 2014, the number of public universities rose to 22 while the number of private universities stood at 26 (CUE, 2014) and this number continues rising.

Private university education has been a dynamic area in post-secondary education in Kenya that has served to complement public universities in meeting students' need for degrees in various fields. Students enrolled in these universities are those who meet the criteria for admission to universities but cannot be absorbed by public universities due to limitations in space. Evidence of growth in the number of private institutions and enrolment suggest that higher education is becoming increasingly diversified into two sections; private and public (Gudo, 2014). In the absence of adequate national resources to support an expanding higher education sector, private higher education has witnessed remarkable growth. Growth of private universities has been further fueled by the limited opportunities availed by public universities and the constant closure of state-funded universities. A comparison to most other African countries, Kenya's private university system is relatively well-developed. According to Mwiria & Ngome (1998) it had a population growth rate of about 4% in the 1970s and 1980s when the demand for university education overwhelmed the Kenyan government higher education establishment. The government thus looked at private universities as a means of alleviating public universities' pressure (Gudo, 2014). The private sector has seen accelerated growth over the last 13 years and it now holds 20% of all students currently enrolled in universities (Odhiambo, 2014).

The Kenya education sector is especially lacking in data on attrition rates even though student attrition is underscored by the inclusion of institutional statistics as key performance indicators in measuring educational quality as required by the central government through the Ministry of Higher Education, Science and Technology (MHEST, 2008). The government's single largest expenditure is spent on education and accounts for about 30% of annual budget. Most of the funds go towards higher education and teacher training (Ministry of Higher Education, Science, and Technology, 2009). By implication therefore, universities are expected to meet the government's strategic plan budgets by producing an educated work force through degree programs. A study on private university expansion in Kenya by Mwebi and Simatwa (2013) comes closest to the few studies done in Kenya that bring out the attrition problem. The study found out that in private universities the dropout rate in the 2007/2008 cohort in private universities in Kenya was 1.70%. This rate is made up of only those students who dropped out of the program and left without getting a degree. Delays in getting a degree caused by repeated semesters or retakes in examinations have also been considered as adding to attrition rates in this study.

While expansion and improvement of university education in Kenya is supported by both government and society, universities still have to contend with the challenge of student retention and attrition. Student attrition is seen where there are sharp drops in academic performance manifested by frequent repeats of academic years, retaking of examinations after failure, deferment of units or dropping out of university altogether. This process of student performance deterioration is enigmatic considering that university students' population in Kenya is usually made up of students who have excelled in secondary school national examination (Mutemba, 2011). A study on Kenyan degrees by Cheruiyot, Thurrow and Too (2007) found that universities were losing revenue

due to students not completing their degrees or taking more time to finish the degrees. The result was that planning for universities was encumbered as completion times became unclear (Cheruiyot, et. al, 2007). To confirm this further is Mwebi and Simatwa (2013) in a study among students in private universities in Kenya. They found that 1.7% of students who had been admitted in private universities cycle for 2007/2008 academic year dropped out translating to 3.2% education wastage with a completion rate of 96.8%.

1.2 Statement of the problem

Student attrition has remained one of the least researched areas facing institutions of higher learning while its detrimental effects are widespread. To the student, attrition means reduced opportunities to obtain gainful employment, prosperity and social mobility. To the university, attrition translates into loss of revenue in addition to perceived failure in increasing the graduate population in the country. Whereas institutional and individual variables as well as students' background variables have been identified as playing a role in university attrition the role of examination repeats, semester deferment and dropping out as contributors to attrition has not been extensively investigated. This study therefore set out to establish the multidimensional nature of attrition to include examination retakes semester deferment and dropping out. This may help in developing appropriate intervention programs focusing on the mode of attrition leading to possible better management and planning of university student retention.

1.2 Objectives of the study

The main objective of the study was to find out the attrition rates of undergraduate students in private universities in Nairobi County, Kenya. The specific objectives of the study were:

- i. To establish the levels of examination retakes among students in private universities in Nairobi County Kenya.
- ii. To find out the level of dropout rate among students in private universities in Nairobi County, Kenya.
- iii. To investigate the extent of semesters deferment among students in private universities in Nairobi County Kenya.

1.3 Theoretical framework

The attribution theory of achievement, motivation, and emotion (Weiner, 1985) was used to ground the study. In Weiner's (1985) view, individuals are affected by causal ascriptions influenced by intrinsic and extrinsic motivation. The current research aimed at exploring examination retakes, deferment of semesters and dropping out of university as contributors to attrition rate. The attribution theory provided a foundation to address the research objectives in this study.

The main tenet of the attribution theory is that behavior is attributed to internal or external causes. The theory is concerned with how individuals interpret events and how this relates to their thinking and behavior. An individual who gives internal causal ascriptions is one with internal motivation, which is based on his own decisions and actions without any thought to the external reward (Williams, 2006). In the context of this study, students with an internal motivation see the need to achieve without any external stimuli. Intrinsically motivated students will therefore pursue their studies to completion with or without support from their peers and faculty as they have a desire to succeed.

Consequently, if an individual believes outside stimuli are responsible for events that occur, this indicates external ascriptions to the cause of the event. Learning experiences at higher levels may be

positive or negative and students who attribute their university persistence or success to some external factor attribute their failure to such factors. When a student externalizes the blame, the responsibility shifts from the student to an external factor (Williams, 2006), which leads to the undesirable action of poor academic performance within a program. In the context of the current study, an external force was viewed by a student in the form of a culture or system within the university that reinforces the lack of completion to graduation. Due to diversity of the attributions that students were likely to make, the current study explored performance in examinations and semester deferments.

For Weiner, the stability dimension in the attribution theory's framework captures whether causes change over time or not. An example is that academic ability is viewed as intrinsic and a stable factor over time. People give explanations for their successes and failures as stable in nature (attributing outcome to ability or difficulty of task) or explanations of unstable nature (attributing to luck or effort). The theory suggests that when people attribute their successes to unstable causes and their failures to stable causes, the probability of persistence is low (Weiner, 1985). The theory was useful in analyzing examination repeats, semester deferment and dropping as contributors to student attrition in private universities in Nairobi Kenya.

1.4 Conceptual Framework

The conceptualization of this study is that student attrition is multidimensional and not limited to student exiting degree programs before completion but also includes examination retakes/repeats and semester deferments. The three variables are derived from literature which indicates that when students repeat examinations, defer semesters or drop out altogether a degree program takes longer than the prescribed time or the degree is not achieved at all. This study has taken such features as contributing to student attrition.

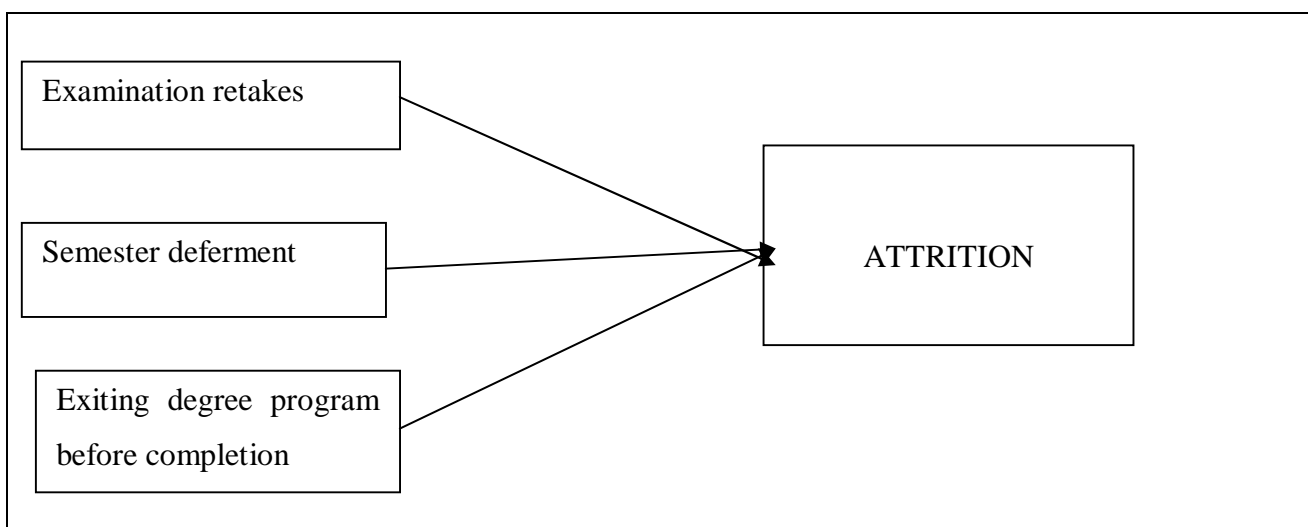


Figure 1: Conceptual Framework: dimensions of attrition

This model allows the incorporation of the aspects that form the specific factors allowing for a broader reach. From the literature review, the author has demonstrated that the impact of these variables has not been studied in the Kenyan context.

2.1 Research Methodology

The study was conducted among private universities in Nairobi County. This was because the county has the highest number of private universities in the country and may be representative of attrition conditions among students in universities in Kenya. The research sample consisted of 387 students from 13 private universities in Nairobi county and 60 students who had dropped out. The 60 students were reached through the snowballing technique. Research instruments consisted of a paper based questionnaire and in-depth interviews which enabled in-depth exploration of the study variables.

3.0 Findings

3.1 Examinations retakes as contributors to attrition

The objective of this study was to investigate the student attrition rates among students in private universities in Nairobi County. To achieve this, students responded to questionnaire items that required them to state if they had repeated examinations or deferred semesters. Students also responded to the items that asked them to report if they knew of students who had dropped out from the university. The findings from examination retakes are as presented in table 1

Table 1: Retaken Examinations

	Frequency	%	Valid %	Cumulative %
No response	1	.3	.3	.3
Never	326	84.2	84.2	84.5
Once	40	10.3	10.3	94.8
Two times	12	3.1	3.1	97.9
Valid Three times	3	.8	.8	98.7
Four times	1	.3	.3	99.0
Five times	1	.3	.3	99.2
>5 times+	3	.8	.8	100.0
Total	387	100.0	100.0	

From the scores of retake of examinations, 326 students out of a total of 387 reported that they had never repeated examinations, while a total of 60 students reported that they had repeated examinations one or more times. The circumstances behind the retake of an examination were when a student had been unable to score a pass mark in a given end of semester examination as set by individual universities, or when a student for one reason or another, like sickness or absenteeism, was unable to sit for an examination when it was offered. Retaking an examination has the implication that a student is left behind by a cohort and may need to put in extra time at university to attain a degree.

3.2. Retake of Examinations by Gender

Retaking of examinations was also investigated from a gender distribution angle which showed 83% of the male students and 86% of the female students had never retaken an examination as shown in Figure 2.

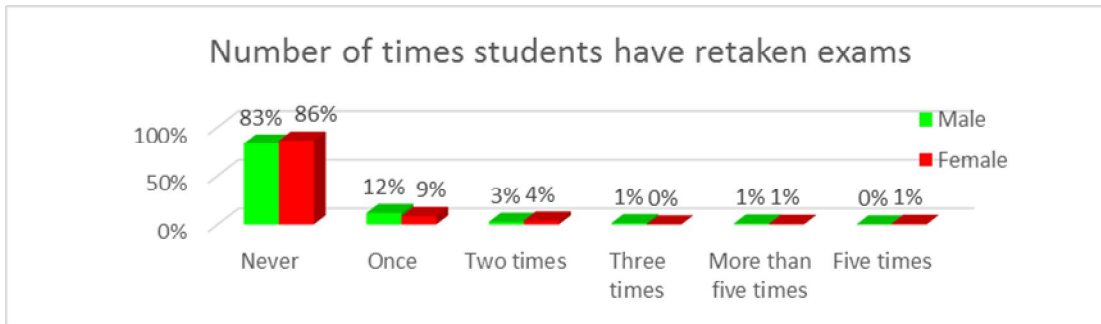


Figure 2: Students who have retaken examinations by gender

There was, however, a small percentage, 12% of male students and 9% of female students sampled, who reported having had to retake an examination once and 3% of males and 4% of females having retaken examinations twice. This gives a total of 15% boys and 13% girls who have had retakes in examinations.

1.3. Semester Deferment as Contributor to Attrition

As a measure of attrition the students responded to questionnaire items which sought to know the number of times the students had deferred a semester. The results are as shown in table 2

Table 1: Deferment of Semesters

	Frequency	%	Valid %	Cumulative %
No response	2	.5	.5	.5
Never	346	89.4	89.4	89.9
Once	30	7.8	7.8	97.7
Valid Two times	6	1.6	1.6	99.2
Three times	2	.5	.5	99.7
Four times	1	.3	.3	100.0
Total	387	100.0	100.0	

Table 2 shows that 346 students out of 387 reported that they had never deferred a semester while 39 students reported that they had deferred semesters at least once. 91% of female students and 89% of male students had never deferred semesters while a significant 9% of male and 6% of female students had deferred a semester at least once with 2% of female and 1% of males having deferred twice as shown in Figure 4.4

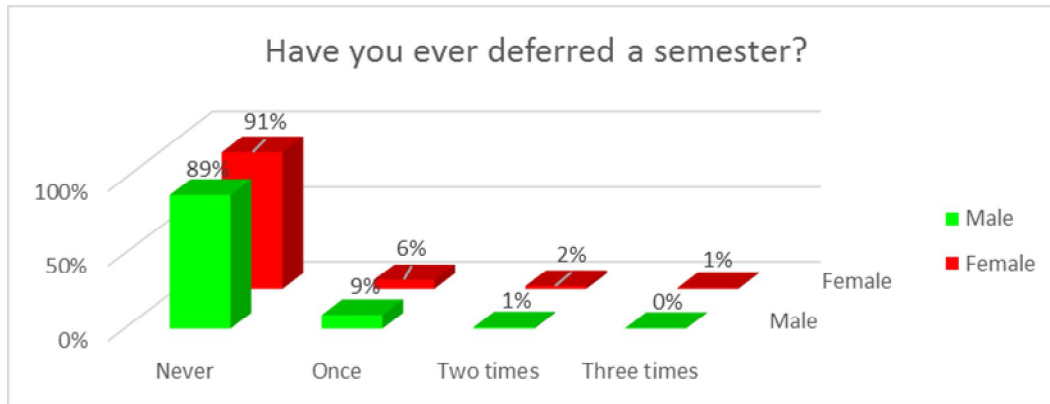


Figure 3: Deferment of Semester as Shown by Gender

Deferment of semesters arises when a student is unqualified to continue to a progressive year due to requirements as laid down by individual universities. This could arise out of poor academic performance manifested by failed examinations or by failure to fulfill all requirements of a semester by not attending classes. A student could also voluntarily defer a semester by applying and obtaining academic leave as per regulations of different universities. Deferment of a semester has the implication that a student does not progress with a cohort and may take much longer to finish a degree than the prescribed time in a university.

3.4 Dropping out as a contributor to student attrition

On the questionnaire item of whether the respondent students knew of someone in their year of study that had ever dropped out of university, 14% of female and 23% of male students sampled knew of someone who had dropped and gave contacts of such students. 60 respondents were successfully interviewed following this information.

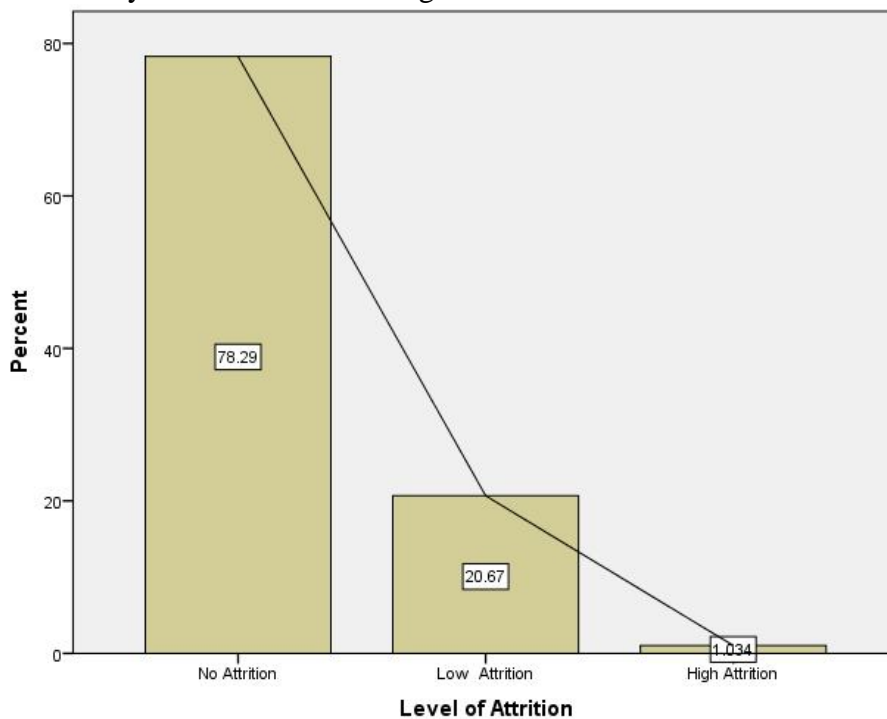


Figure 4: Distribution Showing Level of Students Attrition

In Figure 4 above, the no attrition mark shows the highest rank followed by low attrition and high attrition levels. The implications of these findings are as depicted in Table 4.5 showing attrition descriptive scores.

Table 2: Descriptive Scores of Attrition

N	Valid	387
	Missing	0
Mean		2.39
Mode		2.00
Std. Deviation		.96
Skewness		3.47
Range		6.00
Minimum		2.00
Maximum		8.00

Minimum and maximum scores were 2 and 6 respectively. The mean score was 2.39 with a standard deviation of 0.96. Coefficient of skewness was 3.47 meaning that majority of the respondents had low scores on attrition.

Figure 4 shows that up to 79% of students are shown as having never repeated an examination or deferred a semester and therefore the likelihood of finishing their university education was improved. However, up to 22% had some level of attrition which means the students reported a measure of examination repeats and semester deferment. A further 60 comprising of 15% of the study population had dropped out of university. Although these results suggest that most students are managing the academic process successfully, the results also show that there is a substantial minority of students (22%) who are failing to come to terms with the demands of university rigor. In this study low and high levels of attrition have been compiled and make up the 22% of attrition. In addition to this figure the students who had dropped out of university were added as an explicit percentage of attrition making the rate $22\% + 15\% = 37\%$.

Rates of attrition reported elsewhere in the world such as Britain, USA and Canada differ greatly with the rates established in this study. Barnes and Randall (2012) report attrition rates of as high as 50% in Britain and Canada. USA rates of attrition compare to the Canadian ones of 50% as reported by Barefoot et. al. (2013). Studies from India and the Middle East however indicate that completion rates at university fall between 60% -79% and attrition rates are between 20% and 35% (Sakthival & Raju, 2006) which is more or less what this study has shown. Such a dissonance between rates of attrition from the West and those from Middle East would perhaps be explained by the fact that the cultural factors in India and Middle East have more similarities with the Kenyan ones than those found in Britain, USA and Canada.

This data on attrition is further accentuated by the telephone interviews of those students who had dropped out of university altogether. The study was able to get in touch and interview 60 of these students. When asked why they dropped out of university the students cited a variety of reasons. Among the verbatim interviews which were recorded was one from a former student who cited lack of interest in the degree course she was pursuing as driving her to drop out of her degree program. She added that she did not find the degree necessary for the kind of livelihood that she was interested in. She put her views in the following way;

A degree is not always necessary to make money. I am a 'hustler' by nature and I am making money – I don't need a degree. I find books and exams very boring. The importance of these university degrees is exaggerated.

Another of these students felt that the university asked for ‘too much’ especially from second years. He stated his fears in the following way;

‘Nobody on campus showed interest in us. We were regarded as ‘old’ after the first year. Nobody seemed to care. Many of the assignments which we were asked to do were casually introduced to us in class without detail and woe unto anybody who dared ask for clarification...we were reminded that ...’you should know this by now’. It was very frustrating and some of us gave up. (Dropped out student; telephone interview)

When respondents on campus were asked what their views were on the reasons why their former friends and/or classmates dropped out of the degree program, the responses were interesting and varied.

The reasons given could be categorized into three groups, that is home, individual and university environmental factors. Among the home factors, the students said that some students were unable to continue studies due lack of finances to meet school fees and personal maintenance. Other reasons given were that some students lived too far away from the university and were unable to commute every day and had therefore dropped out of university. There were those students who were reported to have dropped out due to a sickness in the family while others suffered misfortunes such as bereavement.

Of the individual factors which continuing students thought led to dropout were drug addiction, depression arising from academic stress as well as negative influence from peers. Some of the students who had dropped out were seen as balancing between being students and employees. A few of the students were also reported to have had businesses which they were running, making it difficult to concentrate on studies. Other individual factors reported were that students found the ‘going too tough’ while others got unexpected pregnancies.

University environmental factors reported by the students as reasons for dropping out included issues such examination referrals, non-attendance of classes and rules and regulations which the students thought were ‘childish’ and did not make sense. Table 4 shows the summary of categorization of the reasons for dropping from the point of view of the continuing students.

Table 4: Categorization of Attrition Reasons

Individual	Home	University
i. Drug addiction	i. Lack of	i. Change of program
ii. Stress/depression	fees/financial	ii. Too many
iii. Busy working	constraints	examination referrals
iv. The going is too tough	ii. Growth of	ii. Not attending class
v. Indiscipline due to	business	v. Childish rules that do
peer pressure	ii. Lived far from	not make sense for
vi. Unexpected	institution	adults
pregnancies	v. Sickness	
vii. Death of parents	v. Social	
viii. Change of mind	background	
	challenges	

The findings showing the reasons given for students dropping out of university show that attrition is as result of a combination of several factors rather than as a result of one single factor. A previous

study by Kyalo and Chumba (2011) among Egerton University students found that in order to determine whether a student is able to complete a degree program, a student's interpersonal skills, the university environment and the social economic status of the family needs to be looked at (p.288).

Notwithstanding that the current study did not seek to investigate gender issues and attrition, it was observed that male students outnumbered female students in all private universities studied. This data was captured under section A of the student's questionnaire. Findings indicate that male students accounted for 63% of the sample and female students 37% of the sample). As illustrated earlier more male students than females students had retaken exams. 83% of the male students as well as 86% of female students sampled had never retaken an exam. 12% of the male students and 9% of the female students sampled had retaken an exam once with 3% of males and 4% of females having retaken an exam twice.

Further analysis revealed that more male students knew of more people who had dropped out than did the female students. These separate findings corroborate findings from an earlier study that female students are less likely to be in groupings where drop out is likely than do male students as seen by (McIntosh, Wilson, & Lipinski, 2012).

Study findings indicate some possibility of students dropping out when older as shown in Table 5, but the number of respondents was not statistically significant. However, it is important to note for future studies that of all the independent variables available to the logistic regression solution, the age of student came first in the model with the value of its odds indicating that as the age of a student goes up, the odds of such a student not moving on to the following year of study increases by a factor of 1.074.

Table3: Distribution of retakes by age

	TOTAL		AGE GROUP									
	Cou nt	%	18-20 years		21-25 years		26-30 years		31-35 years		>35 years	
			Cou nt	%	Cou nt	%	Cou nt	%	Cou nt	%	Cou nt	%
BAS E No Yes	385 310 75	100 81% 19%	92 74 18	100 80% 20%	229 188 41	100 82% 18%	53 41 12	100 77% 23%	9 6 3	100 67% 33%	2 1 1	100% 50% 50%

As a summary on attrition rates, passing examinations at the end of a semester was seen to indicate academic achievement. The academic achievement also tied to deferment of semesters where end of semester examination scores were generally used as an indicator of whether a student will continue to the next year or not (Tross, Harper, Osher & Kneidinger, 2000). More precisely examination grades tend to be "both a reflection of the person's ability and the institution's preferences for particular styles of academic behavior" (Tinto, 1975).

In this study academic achievement, although not studied as a variable, was assessed by the level of examination repeats as self-reported by students. Heads of departments, lecturers and deans of students were also interviewed and gave their perceptions of the relationship between academic performance and attrition rates. One head of department made the following comment;

‘...high stress levels are seen when exam results are announced. Those students who fail to get the pass mark ask for all kinds of favors...’ Some students wish for exams to be marked again hoping that an examiner can add them marks in order to pass. (*Personal Interview, Administrator*)

A dean of students, who had worked with students for more than four years, was of the opinion that the need to pass examination and therefore continue to the next level brought out unacceptable behavior in students such as examination malpractices. He put his comments in the following manner;

‘Students are getting more and more innovative in cheating practices during examinations. These days it is not the old ‘mwakenya’ that we have to deal with. All manner of electronic devices are being used in the examination room, including cell phones, some kinds of electronic watches. Even body parts are being used to write notes intended to be used in the exam room. It is unfortunate that we are losing our students to the ‘animal’ of success at whatever cost...’ (*Personal interview- Dean of Students*).

In summary the measure of student attrition encompassing semester deferments, examination retakes and dropping out of the university shows that a student will experience delays in completing a degree program. The delay has physical, fiscal as well as psychological repercussions for all stakeholders in university education.

The implication of this identified attrition rate is that 37% of students in private universities are taking longer than the prescribed time to complete their degree program while some of them dropped out altogether. Whereas this rate is lower than attrition rates among other populations such the USA, Britain and Canada attrition rates appear to be on the increase in private universities in Kenya. Mwebi and Simatwa (2013) in their study on expansion of private universities in Kenya established that 1.70% of students dropped out before completion of their degree program in the 2007/2008 cohort. This figure does not include those students who repeated examinations or deferred semesters, and the trend is worrying as it has implications for the students, parents and the government. For the students, delay in getting a degree could result in feelings of disappointment, anger and frustration, and a view of oneself as a failure. For the university any situation that results in a student interrupting studies could be viewed as a failure in that instruction because the educational goals which were set have been achieved. The parents are likely to view attrition as a waste of resources and unmet expectations on their children, while for the government the implication is the inability to meet education growth targets.

Conclusions of the Study

The results established attrition rates of up to 37% in private universities in Nairobi County. Attrition levels were determined by assessing the frequency of examination retakes and the incidence of semester deferment in addition to dropping out. The study established an attrition rate of 22% among the students who were in session at the time of the study. Sixty students who were accessed through snowballing technique accounted for 15% of attrition, making a cumulative 37% attrition. Universities in Kenya usually have an examination score cut off point without which a student has to retake an examination in an effort to get the cut off mark. Semester deferment may arise as a result of a student not gaining the required examination passes to go to the next year, or as a personal choice of a wish to take a break. Whatever the case, deferment of a semester has the consequences of a degree program taking longer than the initial stipulated time.

Whereas student's academic performance was not a variable in this study, a significant contribution to the prediction of attrition was identified, which saw that in the retake of examinations, as the performance of a student improves, the odds of dropping out of the course decreases by a factor of 0.797. This finding was supported by a qualitative section of the research where, in the interpretation of interview data, academic performance was ranked as the second reason for dropping out of university. It is likely that a student who passes examinations and excels in other academic requirements will have confidence and will be motivated to persist in university studies until completion. On the other hand, a student who fails in an examination may get demoralized but more so may be forced to repeat a semester in order to meet university requirements. A number of researchers have shown that the amount of effort that students put into their education, affects their academic outcomes (Johnson, Crosnoe, & Elder, 2001; Marks, 2000; Natriello & McDill, 1986; Smerden, 2002 and Okwilagwe, 2002). This finding is also in line with Cizek and Burg (2006) findings among Nigerian students where performance in examination was linked to a variety of emotions including tension and anxiety.

Recommendations of the study

Based on the findings of the study and the conclusions made, the study recommended improvements in learning environments in order to ease or eliminate student attrition. The study recommends that university amenities such as lecture halls, libraries, hostels and dining points adhere to ergonomics. Mechanisms for early detection of attrition risk should be put in place and supported by technology to ensure students pursue their studies to completion. Such structure should include counseling, mentorship, personality enhancement programmes, spiritual support and where possible financial support.

Moreover students should be encouraged to always take a proactive approach to university life which would help them seek faculty and peer support and to use the university environment in a manner that would benefit them thus reducing attrition. It may also be beneficial to study attrition rates in public universities as well so as to have a more complete picture of attrition rates in Kenyan universities. This would help in identifying the actual attrition rates in Kenya as well as coming up with methods to reduce or eliminate attrition in all Kenyan universities as recommended by Kuh et al., (2008).

References

Where are the following references?

Barefoot, B. O., Griffin, B. Q., & Koch, A. (2013). Enhancing student success and retention throughout undergraduate education: A national survey. retrieved from http://www.jngi.org/wordpress/wp-content/uploads/2015/11/JNGInational_survey_web.pdf

- Barnes, B. J., & Randall, J. (2012). Doctoral student satisfaction: An examination of disciplinary, enrollment, and institutional differences. *Research in Higher Education*, 53(1), 47–75. doi:10.1007/s11162-011-9225-)
- Cizek G.J. & Burg S. S., “Addressing test anxiety in a high-stakes environment: Strategies for classrooms and schools”, 1(2). 2006.
- Commission for Higher Education (2014). Universities authorized to operate in Kenya. Brochure
- Gardner S.K., “Contrasting the socialization experiences of doctoral students in high- and low-completing departments: A qualitative analysis of disciplinary contexts at one institution”, *The Journal of Higher Education*, 81(1). 61-81. 2010.
- Gudo, C., “Financing higher education in Kenya: Public–Private partnership approach” *International Journal of Educational Policy Research and Review*, 1(1). 1-5. 2014.
- Herman, C., “Obstacles to success –doctoral student attrition in South Africa”, *Perspectives in Education*, 29(3). 40-52. 2011.
- Johnson, M. K., Crosnoe, R., & Elder, G., Jr., “Students’ attachment and academic engagement: The role of race and ethnicity”, *Sociology of Education*, 74. 318-340. 2001.
- Johnson, J., “Learning communities and special efforts in the retention of university students: What works, what doesn’t, and is the return worth the investment?” *Journal of College Student Retention*, 2(3), 219-238. 2001.
- Kenya National Bureau of Statistics, *Reforming education and training in Kenya: Economic Survey 2012*, Nairobi, National Bureau of Statistics, 2012.
- Kuh, G. D., Cruce, T., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). *Unmasking the effects of student engagement on college grades and persistence*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Kyalo, P. M. & Chumba, R. J., “Selected factors influencing social and academic adjustment of undergraduate students of Egerton University; Njoro Campus,” *International Journal of Business and Social Science*, 2(18). 2011.
- Lovitts, B. E., *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, M.D, Rowman and Littlefield, 2001.

- Marks, H., "Student engagement in instructional activity: Patterns in the elementary, middle, and high schools years", *American Educational Research Journal*, 37. 153-184. 2000.
- Mcintosh, B., Wilson, L., & Lipinski, B., "The extent and nature of student attrition in the first five years at Simon Fraser University," *Canadian Journal of Counseling and Psychotherapy / Revue Canadienne De Counseling Et De Psychothérapie*, 8(3), 2012. [Online]. Available: <http://cjc-rcc.ucalgary.ca/cjc/index.php/rcc/article/view/1653>.
- Mutemba, K.C. (2011). *Student unrest: Challenges and prospects of conflict management in Kenyan universities*. Unpublished PhD thesis.
- Mwebi B., Simatwa E.M.W., "Expansion of private universities in Kenya and its implication on quality and completion rate: An analytical study", *Educational Research*, 4(4). 352-366. 2013.
- Mwiria K. & Ngome, "The World of private universities: the experience of Kenya; network for international policies and cooperation in education and training," *NORRAG News*, (23). 1998.
- Mwiria, K., *Public and private universities in Kenya*, Nairobi, Oxford, 2007.
- Mwiria, K., Ng'ethe, N., Ngome, C., Ouma-Odero, D., Wawire, V., Wesonga, D., *Public and private universities in Kenya: New challenges, issues and achievements*, James Currey, East African Educational Publishers, 2007.
- Natriello, G. & McDill, E. L., "Performance standards, student effort on homework, and academic achievement," *Sociology of Education*, 59. 18-31. 1986.
- Odhiambo, G., "The challenges and future of public higher education leadership in Kenya," *Journal of Higher Education Policy and Management*, 36(2). 183-195. 2014.
- Pascarella, E. (1980), "Student-faculty informal contact and college outcomes," *Review of Educational Research*, 50. 545-595.
- Sakthivel, P.B., & Raju, R., "An instrument for measuring engineering education quality from students' perspective," *The Quality Management Journal*, 13(3). 23-34. 2006.
- Smerdon, B. (2002). Engagement and achievement: Differences between African-American and White high school students. *Research in Sociology of Education and Socialization*, 12, 103-134.?

- Tinto, V., "Dropout from higher education: A theoretical synthesis of recent research," *Review of Educational Research*, 45(1). 89-125. 1975.
- Tinto, V., *Leaving College: Rethinking the causes and cures of student attrition*, Chicago, The University of Chicago Press, 1987.
- Tinto, V., *Student retention and graduation: Facing the truth, living with the consequences*, Washington, D.C, The Pell Institute, 2007.
- Tross, S. A., Harper, J. P., Osher, L. W., & Kneidinger, L. M., "Not just the usual cast of characteristics: Using personality to predict college performance and retention," *Journal of College Student Development*, 41. 323-334. 2000.
- Weiner, B., "Intrapersonal and interpersonal theories of motivation from an attributional perspective" *Educational Psychology Review*, 12(1). 1-14. 1985.
- Weiner B., "The development of an attribution-based theory of motivation: A history of ideas," *Educational Psychologist*, 45(1). 28-36. 2010.
- Williams T., *Sense of belonging and student success: An analysis of student experiences in South African universities*, Thesis submission, University of New Orleans. 2006.