



Influence of students' learning experiences on involvement in alma mater in selected Ghanaian, Kenyan and Rwandan Universities



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ABSTRACT

The study sought to establish the influence of students' learning experiences on involvement in alma mater. The cross-sectional survey design was employed for the study. The sample size was 1011 respondents comprising 382 from Kenyatta University, 277 from University of Rwanda-College of Education and 352 from University of Cape Coast. Data were collected via questionnaires and analyzed using Logistic Regression. The study found that academic services and non-academic learning experiences positively affect students' willingness to further education in attended institution or participate in further university activities after graduation ($p < .05$). The study recommends that universities pay attention to students' learning experiences because these affect the willingness to continuously associate with institutions after graduation.

1. Introduction

Across times and societies, higher education has gained the recognition of being the level of education that trains elites, technocrats and politicians (Brezis & Crouzet, 2004). Indeed, higher education plays a pivotal role in the social, economic and political development of any nation. This has given a special impetus to investments in higher education (Ampofo et al., 2015). Consequently, the trend for students registering for higher education has exponentially increased especially in the developing world (Ampofo et al., 2015). The number of higher educational institutions has also increased sharply in the last two decades. In Kenya for example, the number of public universities has increased from 7 in 2010 to 33 by 2017, a growth rate of over 400% (CUE, 2017). The implication of this is that universities are operating in a competitive environment as they all tap into the same pool of potential students. This poses a significant question on the types of learning experiences university students are exposed to and the extent to which these can be reflected in the level of association with their universities after completion (Fig. 1).

The learning experiences of students in universities are important for

two main reasons. One, the universities expect their graduates to market them to potential students. Secondly, the universities have high student expectations in terms of positive contributions to their alma mater; i.e. future relations with the attended university or college, (Siming, Niamatullah, Gao, Xu & Shafi, 2015). Students' loyalty to their university is a multiphase concept that stretches from enrolment to graduation and beyond (Koenig, Asaad, Palmer, & Petersone, 2016). To emphasize the extent to which learning experiences impact alma mater, Andrade (2006) indicates that international students from English-speaking countries do make important educational and economic contributions to the attended higher learning institutions. This has pushed these institutions to investigate and fix in good time the challenges these students face and put in place responsible support services for them. Some of these challenges were seen to be associated with language proficiency and culture.

The students learning experiences can be both academic and non-academic. As explained by Quaye and Shaun's (2015) in a study conducted in United States of America, "academic learning experiences" encompass the learning environment itself, the university community -from academics to administration, follow-up and assistance to students, teaching-learning methodologies, intellectual growth, interaction,

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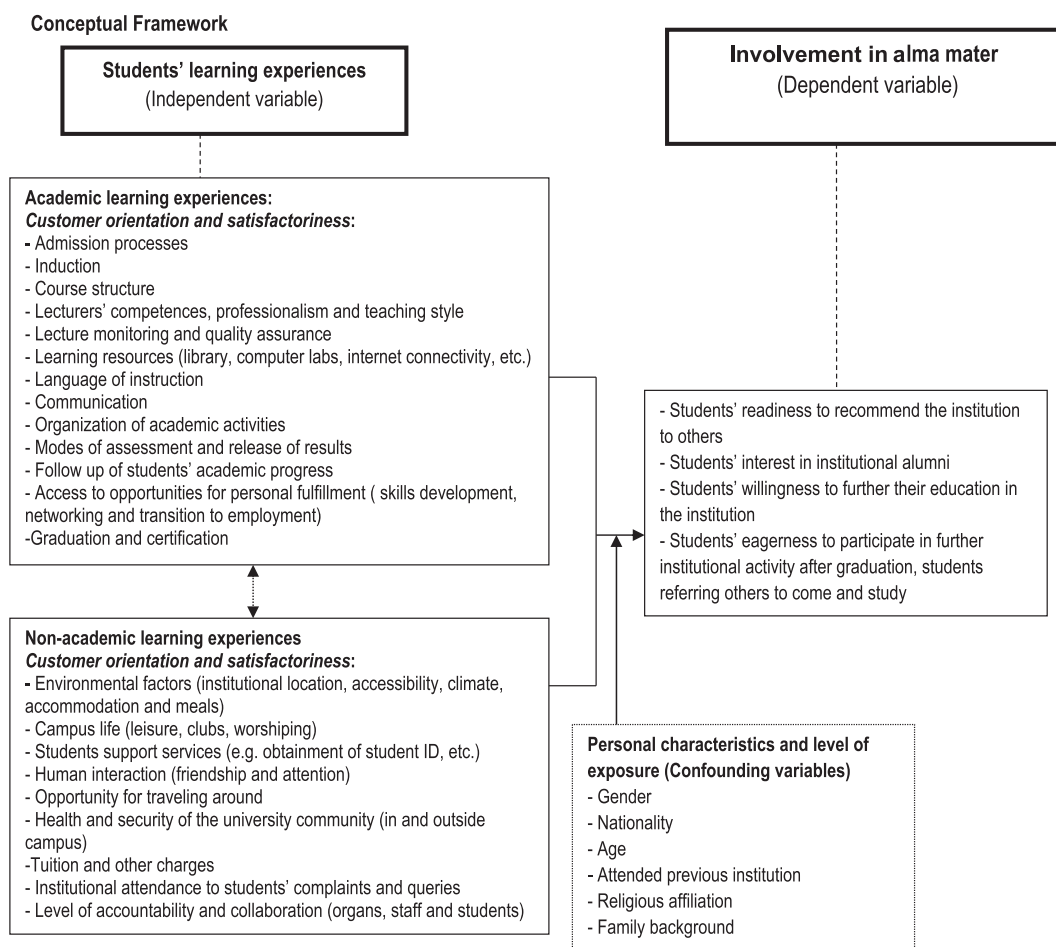


Fig. 1. Learning experiences and their influence on students' level of involvement in alma mater.
Source: Researchers (2017).

exchange and mutual respect. On the other hand, a student's "*non-academic learning experience*" is a result of numerous factors revolving around teaching and learning as experienced in social interactions (Dziuban, Hartman, Juge, Moskal, & Sorg, 2006). In addition, Dominguez-Whitehead (2017) explain non-academic learning experiences in terms of those experiences that bring about personal development, social connectedness, life-long friends, development of networks, life skills and graduate qualities. They add-value to the overall student experience and contribute to the successful completion of student's study as well as success in life after studies. They are brought up by circumstances like living on campus, clubs and societies, social events on campus, being in an unfamiliar environment and any other different experiences.

All along the academic journey, educational interventions bring about different levels of satisfaction in as far as learning experiences are concerned (Zhu, 2012) and learning experiences could explain reason why students choose to continue and justify the higher education ability to cope with students' attrition and retention (Quaye & Shaun, 2015). In fact, students' satisfaction can be viewed as an outcome of the learning process and it is a requirement for successful learning and is linked to improved academic performance (Murmura, Casolani, & Bravi, 2016). This implies that learners' satisfaction can have repercussions on whether learners like to use systems or not, how learners work together and whether there is a good working atmosphere among learners (Zhu, 2012).

Ke and Kwak (2013), enumerate five elements of student satisfaction, namely: learner relevance, active learning, authentic learning, learner autonomy, and technology competence. In addition to these, while Battalio (2007) and Kuo, Walker, Belland, and Schroder (2013) concur on

learner-instructor interaction to constitute a criterion for students' satisfaction, Kuo et al. (2013) add that learner-content interactions combined with technology efficacy constitute the indicators of students' positive perceptions towards learning. Idiegbeyan-Ose and Esse (2013), opine that students' satisfaction can be observed in terms of learning resources -such as the quantity and quality of library resources-as well as good services to end users.

According to Booker and Rebman (2005), students' satisfaction is also related to the students' decision to take additional classes and the recruitment of future students. That is why more and more higher education institutions strive to ensure students' satisfaction as a means to attract prospective candidates and maintain links with their graduates. This is done by making educational experiences a subject of discussion via different evaluation protocols, social networks and research forums (Dziuban et al., 2006).

Ideally, university students are expected to become ambassadors of their institutions. The two are supposed to develop a strong bond akin to a mother-child relationship. Just like a child learns from the mother, university graduates learn critical skills that foster individual and societal development from the university. Out of this relationship, the expectation is that university graduates would positively market these higher learning institutions and seek support for their advancement. The reality, however, is that many university graduates show relatively low interest to associate with the institution that trained them. Yet these graduates are in most cases financially and politically empowered. For instance, in the selected universities in Ghana, Kenya and Rwanda the contribution of the alumni's to the growth of institutions has remained quite low. In the three universities, the growth of the Alumni network is stunted as very

few graduates respond to invitation for meetings, fundraising and membership registration. This study posits that this lack of interest in the universities in the three countries by the alumni could be due to some undesirable academic and non-academic learning experiences that they could have undergone as students.

2. Literature review

The alumni play a key role in increasing the visibility as well as marketing a given institution. Consequently, many universities have established alumni associations to harness this potential. Alumni also do play a mentoring role to would be students as well as fresh students. As noted by [Maina, Burrell, and Hampton \(2011, p. 13\)](#) leaving home for a student to join a university is stressful and challenging and one may need the support of the alumni who can be instrumental in giving survival tips.

In addition, alumni also support higher education through philanthropic, volunteering, and advocacy exercises. [Simonetti \(2013\)](#) argues that alumni plays the roles of advocacy, influence and shapes the public opinion. According to [Zhimin, Chunlian, and Xian \(2016\)](#), the whole philosophy behind alumni is tied with the social capital theory and social capital transformations. [Newman \(2009\)](#) noted that due to poor economic conditions, public higher education institutions were facing severe storms of financial crisis. Therefore, these institutions are gradually forced to seek for alternative revenue sources, the alumni being one of them. These challenges faced by universities have brought about the need for institutional alumni associations aimed at promoting relationships between higher education institutions and their alumni, which in turn translates into alumni giving and support. [Miller \(2013, p. 134\)](#) indicate that donations from alumni may serve in a number of activities such as improvement of academic programs, funding research, enhancing student life, providing better facilities, and assisting with initiatives of the institution.

[Skari and Ullman \(2012\)](#) also advocate for the establishment of strong alumnus by higher education institutions. They add that in order to take advantage of potential wide pool of future donors, institutions are required to put up programs to recognize, support, and connect alumni, thereby turning ex-students into alumni donors. These authors outline six key building blocks for strong alumni association: (1) institutional support; (2) socialization of students to become alumni donors; (3) provide accurate alumni contact information; (4) maintaining communication with alumni; (5) create opportunities to engage alumni; and (6) to entertain the requests.

Students learning experiences also play a critical role in shaping their relationship with the university and by extension the alma mater. Research evidence shows that students' overall experience influences their future perceptions and feelings towards their university, though positive experience does not necessarily involve loyal attitudes and behaviours ([Koenig et al., 2016](#)). This implies that the way students are handled while undertaking university education has short and long term influence on their later relationship with the university. In support of this view, [Newman \(2009\)](#) indicated that the best and dynamic alumni association members and who made substantial donations to the university were university graduates who had been involved in many extracurricular activities. A similar view is given by [Bommarito \(2012\)](#) who argues that beside scientific knowledge, higher education needs to equip students with leadership skills. [Wampler \(2013, p. 249\)](#) informs that many universities have already embarked on educating their students about what is waiting for them in their alumni years after graduation. The impetus behind the practice is to give to these students hints for success in life after studies, get them excited and experienced; which build a lifetime memorable training from the university.

[Miller \(1990\)](#) whose study on 138 alumni donors randomly sampled indicated that most of these have been either involved in students' extracurricular activities, occupied leadership position on campus or graduated with honors. Interestingly, most respondents (85%) indicated a strong satisfaction with their undergraduate experience and 94% said

they would recommend their alma mater to incoming freshmen. In fact, as underlined by [Ambler, Harvey, and Cahir \(2016\)](#), there is a wide range of expectations from higher education training today. In their views, this tendency is explained by the fact that higher education institutions are now operating in an era of dynamic changes and therefore people under training need strong mentorship to support the work of academics.

A study by [Gallo and Hubschman \(2003\)](#) investigated the relationships between alumni involvement in university alumni events, past university experiences (motivation), and monetary contributions (alumni giving). This study concluded that these variables were significantly related and recommended that universities should devise strategies and activities that satisfy the university students who are the future alumni.

The review has shown that students' learning experiences influence the alma mater. However, there is a dearth of literature in this area in the three countries and this study sought to fill that gap.

3. Purpose, objectives and hypotheses

The purpose of this study was to investigate the level of students' satisfaction with learning experiences and its influence on involvement in alma mater. It was based on the conviction that the findings would enable higher learning institutions to reconsider students' learning experiences as a potential tool for institutional marketing and advancement. This study sought to achieve two objectives, namely:

1. To establish the influence of students' academic learning experiences on involvement in alma mater in selected Ghanaian, Kenyan and Rwandan public universities.
2. To establish the influence of students' non-academic learning experiences on involvement in alma mater in selected Ghanaian, Kenyan and Rwandan Public Universities.

This study sought to show the association between students' academic and non academic learning experiences and their universities focusing on four areas, namely: probability of the students recommending their institutions to others, interest in the institution's alumni, willingness to further education in the same institution, and eagerness to participate in further institutional activities after graduation.

The following hypotheses were formulated to actualize the study objectives.

1. H_0 : Students' satisfaction with academic learning experiences is not a significant predictor of involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public universities.
2. H_0 : Students' satisfaction with non-academic learning experiences is not a significant predictor of involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public universities.

4. Methodology

4.1. Research method and design

The cross-sectional survey design was employed for the study. According to [Lavrakas \(2008\)](#), a cross-sectional involves making inferences about a population of interest from data collected at one point in time. It actually involves looking at people who differ on one key characteristic at one specific point in time. With reference to this study, the data was collected from final year undergraduate full time regular students who differ in their respective programmes of study but have had the opportunity of studying in these same public universities within the specified period.

4.2. Participants

The target population for the study comprised of all final year un-

dergraduate students enrolled in Science, Education, Arts and Business programmes in the selected public universities. In all, the target population was made up of 12,482 students comprising of 2959 from University of Cape Coast, 8625 from Kenyatta University and 898 from University of Rwanda-College of Education. The Slovin's formula (Amin, 2005; Tejada & Punzalan, 2012; Yamane, 1967) was adopted to determine the sample size for the study. This formula was used to ensure fair representation of respondents in the survey sample in relation to the size of population. The formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Where 'n' stands for the sample size, 'N' represents the target population for the study and 'e' denotes the confidence level adopted, and 0.05 was used in this study. The Slovin's formula is convenient in establishing the correct minimum sample size to estimate a population proportions with the confidence coefficient of 95% (Tejada & Punzalan, 2012). A total sample size of 1011 was drawn for the study as shown in Table 1:

4.3. Instrument

A self-constructed questionnaire on students learning experience was the main instrument used for data collection. The questionnaire was made up of four sections. Section A gathered demographic information on respondents. Section B concentrated on academic learning experiences such as students' orientation and satisfaction in terms of academic learning experiences. Section C focused on non-academic learning experiences such as adaptability to environmental factors and students' orientation and satisfaction with services offered in the university. The final section concentrated on students' association with their respective higher learning institutions.

4.4. Procedure

The conceptualization of the study, its planning and development of research instruments were done in Kenya by the six researchers (two each from the participating countries). Thereafter, each team collected data in its home university. Prior to the commencement of data collection, permission was sought from the institutional review boards of the respective public universities selected for the study. All participating students signed an informed written consent to assure them of anonymity and confidentiality of the data collected from them. Each team of the researchers met the respondents during lecture periods, sought permission from their respective lecturers and explained the objectives of the research to them. In each of the universities, the researchers carried out the data collection themselves. The students were given a maximum of two weeks to submit their filled instruments.

4.5. Data analysis

Data were analyzed using inferential statistics of Logistic regression (Sperandei, 2014). Logistic regression analysis is a statistical technique that describes the relationship between an independent variable (either continuous or not) and a dichotomic dependent variable, that is, a variable with only two possible values: 0 = outcome absent and 1 = outcome

Table 1
Target population and sample size.

Country	University	Target Population	Sample Size
Ghana	University of Cape Coast	2,959	352
Kenya	Kenyatta University	8,625	382
Rwanda	University of Rwanda-College of Education	898	277
TOTAL		12,482	1011

present (Tripepi, Jager, Dekker, & Zoccali, 2008). In the case of the present study, the dependent variable was dichotomic in a sense that respondents could rate the outcome variable indicators using 1 or 0. Given this rating, there were only two possible values: 0 = outcome absent or 1 = outcome present. The statistical coefficients established by the Logistic Regression were R Squared (R²), which is the proportion of variance in the dependent variable (involvement in alma mater) as predicted by the independent variable (either satisfaction with academic or non-academic experiences); the Beta (B) which is the average change in the dependent variable corresponding to one unit of change in the independent variable controlling for other predictors (Sperandei, 2014) and the p-value, which is the probability that the observed value of B is significant or not. The statistical coefficients were reported in Tables 2 and 3.

5. Results

The first objective sought to establish the influence of academic learning experiences on students' level of involvement in alma mater in selected Ghanaian, Kenyan and Rwandan public universities. In relation to this objective the following null hypothesis was tested:

Students' satisfaction with academic learning experiences is not a significant predictor of involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public Universities.

To test this hypothesis, Logistic Regression analysis was conducted to compute the required statistical coefficients as reported in Table 2.

Table 2 reports the results of the Logistic Regression analysis of students' satisfaction with academic services and involvement in alma mater based on four areas namely probability for students to recommend attended institutions to others, interest in the institution's alumni, willingness to further education in attended institution and eagerness to participate in further institutional activities after graduation. As can be seen in the Table, the Model Chi-Square of satisfaction with academic services and probability to recommend others to institutions is not significant (X² = 0.478, p = .187 > 0.05), which means that the model does not improve the prediction. Likewise, the Beta value (.619) is positive which means that satisfaction with academic services has a positive influence on probability to recommend others to institutions but this is not significant as the significance value is higher than the probability value of .05. This means that satisfaction with academic services is not significantly associated with students' likeliness to recommend others to institutions. Based on R Squares, we note that 2.4% of variation in probability to recommend the institution to others is attributable to

Table 2
Results of Logistic Regression analysis of students' satisfaction with academic learning experiences and involvement in alma mater.

Variables in the model	B	Std. Error	P-value
Satisfaction with academic services vs Probability to recommend others to institutions Note: R ² = .024 (Cox & Snell R Square), .033 (Nagelkerke R Square), Model X ² (1) = .478, p > .05, *P < .05	.619	.469	.187
Satisfaction with academic services vs Interest in the institution's alumni Note: R ² = .068(Cox & Snell R Square), .0101 (Nagelkerke R Square), Model X ² (1) = .235, p > .05, *P < .05	-1.099*	.516	.033
Satisfaction with academic services vs willingness to further education in attended institution Note: R ² = .051(Cox & Snell R Square), .089(Nagelkerke R Square), Model X ² (1) = .1.040, p > .05, *P < .05	1.735*	.626	.006
Satisfaction with academic services vs eagerness to participate in further institutional activities after graduation	.847	.488	.082

Note: R² = 0.000(Cox & Snell R Square), .000(Nagelkerke R Square), Model X²(1) = 0.006, p > .05, *P < .05.

Table 3

Results of Logistic Regression analysis of students' satisfaction with non-academic learning experiences and involvement in alma mater.

Variables in the model	B	Std. Error	p-value
Satisfaction with non-academic services vs Probability to recommend others to institutions Note: R ² = .031 (Cox & Snell R Square), .041 (Nagelkerke R Square), Model X ² (1) = .470, p > .05, *P < .05	.134	.518	.796
Satisfaction with non-academic services vs Interest in the institution's alumni Note: R ² = .302(Cox & Snell R Square), .419 (Nagelkerke R Square), Model X ² (1) = 5.387, p > .05, *P < .05	-.693	.548	.206
Satisfaction with non-academic services vs willingness to further education in attended institution Note: R ² = .009(Cox & Snell R Square), .014(Nagelkerke R Square), Model X ² (1) = .138, p > .05, *P < .05	1.386*	.645	.032
Satisfaction with non-academic services vs eagerness to participate in further institutional activities after graduation Note: R ² = 0.010(Cox & Snell R Square), .015(Nagelkerke R Square), Model X ² (1) = 0.158, p > .05, *P < .05.	.693*	.645	.032

Note: R² = 0.010(Cox & Snell R Square), .015(Nagelkerke R Square), Model X²(1) = 0.158, p > .05, *P < .05.

satisfaction with academic services (R² = 0.024 on Cox & Snell R Square), 3.3% of variation in probability to recommend the institution to others is attributable to satisfaction with academic services (R² .033 on Nagelkerke R Square).

The Table also shows that the Model Chi-Square of satisfaction with academic services and interest in the institution's alumni improves our prediction (R² = 0.235, p = .033 < .05). The Beta value (-1.099) is not positive which means that satisfaction with academic services is not a positive predictor of interest in the institution's alumni and this is significant as the significance value is less than the probability value of .05. This means that satisfaction with academic services is a significant predictor of interest in the institution's alumni. Considering the R Square values, 68% of variations in the interest in the institution's alumni is allowable to satisfaction with academic services (R² = 0.068 on Cox & Snell R Square), while 1.01% of variation in the interest in the institution's alumni is attributed to satisfaction with academic services (R² = 0.0101 on Nagelkerke R Square).

Reference made to the Table also indicates that the Model Chi-Square of satisfaction with academic services and willingness to further education in the attended institution improves our ability for prediction (X² = 0.1040, p = .006 < .05). The Beta value (1.735) is positive, therefore a positive predictor of willingness to further studies in the attended institution and this is significant because the significance value is lower than the probability value of .05. The data in the Tale also indicate that 51% of variation in willingness to further studies in the attended institution is attributable to satisfaction with academic services (R² = 0.051 on Cox & Snell R Square), while 8.9% of variation in willingness to further studies in the attended institution is attributed to satisfaction with academic services (R² = 0.089 on Nagelkerke R Square).

The Table further indicates that the Model Chi-Square of satisfaction with academic services and eagerness to participate in further institutional activities after graduation does not improve our ability for prediction (X² = 0.006, p = .082 > 0.05). The Beta value (.847) is a positive but not a significant predictor of eagerness to participate in further institutional activities after graduation (p = .082 > 0.05). The R Square values indicate that 0% of variation in eagerness to participate in further institutional activities after graduation is attributable to satisfaction with academic services (R² = 0.000 on Cox & Snell R Square) while 0% of variation in eagerness to participate in further institutional activities after graduation (R² = 0.000 on Nagelkerke R Square) is attributable to satisfaction with academic services.

The second objective was to establish the influence of non-academic

learning experiences on students' level of involvement in alma mater in selected Ghanaian, Kenyan and Rwandan Public Universities. In relation to this objective, the following null hypothesis was tested:

Students' satisfaction with non-academic learning experiences is not a significant predictor of involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public universities.

To test this hypothesis, Logistic Regression analysis was conducted to compute the required statistical coefficients as reported in Table 3.

Table 3 reports the results of the Logistic Regression analysis of students' satisfaction with non-academic services and involvement in alma mater based on four areas namely probability to recommend others to institutions, interest in the institution's alumni, willingness to further education in attended institution and eagerness to participate in further institutional activities after graduation. The statistics reported in Table 3 indicate that Model Chi-Square of satisfaction with non-academic services and probability to recommend the institution to others is not significant (X² = 0.470, p = .796 > 0.05) therefore not improving our ability for prediction. The Beta value (.134) is positive which means that satisfaction with no-academic services has a positive influence on probability to recommend others to institutions but this is not significant as the significance value is higher than the probability value of .05. The meaning of this is that satisfaction with non-academic services is not a significant determinant of students' likeliness to recommend others to attended institutions. Considering the R squares, 3.1% of variation in probability to recommend others the attended institution is attributable to satisfaction with non-academic services (R² = 0.031 on Cox & Snell R Square) while 4.1% 3.1% of variation in probability to recommend others the attended institution is attributable to satisfaction with non-academic services (R² = 0.041 on Nagelkerke R Square).

The Table also indicates that the Model Chi-Square of satisfaction with non-academic services and interest in the institution's alumni is not significant (X² = 5.387, p = .206) which means that it does not improve ability for prediction. The Beta value (-.693) is not positive which means that satisfaction with non-academic services is not a positive predictor of interest in the institution's alumni but this is not significant as the significance value is higher than the probability value of .05. It means that satisfaction with non-academic services does not significantly contribute to interest in institution's alumni. The R Square values show that 30.2% of variation in the interest in the institution's alumni is attributable to satisfaction with non-academic services (R² = 0.302 on Cox & Snell R Square) while 41% of variation in the interest in the institution's alumni is attributable to satisfaction with non-academic services (R² = 0.419 on Nagelkerke R Square).

Data recorded in Table 3 also indicate that the Model Chi-Square of satisfaction with non-academic services and willingness to further education in attended institution is significant (X² = 0.138, p = .032 < .05) and hence improving our ability for prediction. The Beta value (1.386) is positive, therefore a positive predictor of willingness to further studies in the attended institution and this is significant because the significance value is lower than the probability value of .05. This implies that satisfaction with non-academic services significantly contributes to willingness to further education in attended institution. The R Square values indicate that 0.9% of variation in willingness to further education in attended institution is attributed to satisfaction with non-academic services (R² = 0.009 on Cox & Snell R Square) while 1.4% of variation in willingness to further education in attended institution is attributed to satisfaction with non-academic services (R² = 0.014 on Nagelkerke R Square).

Data recorded in Table 3 further indicate that the Model Chi-Square of satisfaction with non-academic services and eagerness to participate in further institutional activities after graduation is significant (X² = 0.158, p = .032 < .05), which improves ability for prediction. The Beta value (.693) is positive, hence a positive predictor of eagerness to participate in further institutional activities after graduation and this is significant because the significance value is lower than the probability value of .05. The meaning of this is that satisfaction with non-academic

services significantly contributes to eagerness to participate in further institutional activities after graduation. The R Square values mean that 1.0% of variation in eagerness to participate in further institutional activities after graduation is a result of satisfaction with non-academic services ($R^2 = 0.010$ on Cox & Snell R Square) while 1.5% variation in eagerness to participate in further institutional activities after graduation results from satisfaction with non-academic services ($R^2 = 0.015$ on Nagelkerke R Square).

6. Discussion

Based on the finding, the study rejected the first null hypothesis which stated that 'students' satisfaction with academic learning experiences is not a significant predictor of their involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public Universities.' This implies that the current students' satisfaction with academic learning experiences within academic institutions may have adverse effect on their willingness to be associated with the same institutions. This finding concurs with that of Miller (1990) who studied 138 alumni donors; 85% of whom indicated a strong satisfaction with their undergraduate experience while 94% said they would recommend their alma mater to incoming freshmen. Students' satisfaction with learning experiences is also related to the students' decision to take additional classes and the recruitment of future students (Booker & Rebman, 2005). Thus, the future of the university in terms of student recruitment has a relationship with the satisfaction of the currently enrolled students.

Similarly, the study rejected the second null hypothesis which stated that 'students' satisfaction with non-academic learning experiences is not a significant predictor of their involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan higher learning institutions.' According to Dominguez-Whitehead (2017) non-academic learning experiences add-value to the overall student experience and contribute to the successful completion of student's study as well as success in life after studies. This infers that the current student satisfaction with non-academic learning experiences may have drawback on association with the universities. This concurs with the study by Newman (2009) that established that the best and dynamic alumni association members were university graduates who had been involved in many extracurricular activities. This finding is critical for extra-curricular activities as an area that is not given prominence in many universities especially in the study locale.

Overall, there is a need to improve the students' academic and non academic learning experiences in the university. This finding is in agreement with Koenig et al. (2016) who established that students' overall experience influences their future perceptions and feelings towards their university. This is further buttressed by Gallo and Hubschman (2003) who aver that motivation of students in both their academic and non-academic activities is a major determinant of their future involvement in the alumni events as well as making monetary contributions.

7. Conclusions and recommendations

Based on the findings of hypothesis one, the study rejected the null hypothesis that students' satisfaction with academic learning experiences is not a significant predictor of involvement in alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public Universities. The study therefore concludes that the current students' academic learning experiences within the institutions may adversely affect their willingness to be associated with the same institutions after graduation. Therefore, universities in the three countries should put strategies in place to improve student satisfaction with academic experiences so as to enhance their level of willingness to be associated with the institutions. On the administrative side, this can be achieved through (i) the extension of induction and academic integration period, (ii) the

enforcement of university policy through staff monitoring, accountability and service delivery, and (iii) embracing a proactive stand in addressing students' issues. On the academic side, the universities should focus on the aspects like improving the students' learning environment by investing in the physical infrastructure like lecture rooms, libraries and laboratories. The universities should also put in place appropriate ICT infrastructure to facilitate teaching and learning. Moreover, universities should invest in building the capacity of their academic staff in teaching methodologies.

In line with the findings of hypothesis two, the study rejected the null hypothesis that students' satisfaction with non-academic learning experiences is not a significant predictor of alma mater in the four selected areas in selected Ghanaian, Kenyan and Rwandan public Universities. The study therefore concluded that the existing level of students' satisfaction with non-academic learning experiences may negatively affect their level of association with the universities after graduation. The universities must purpose to have pleasant non-academic experiences that interest their students so that they will be motivated to be associated with the institutions after completion. This may be done for instance through the diversification and support of students' leisure, sport and welfare initiatives, psychological well-being, all which bring about human interaction, exposure, personal relaxation and acquaintance with the physical learning environment. For this to be realized, the universities should for example build more hostels for students to cater for the huge number of students who are forced to seek accommodation outside campus. The universities should also strengthen their directorates of students' affairs by hiring more staff like counselors, life coaches, mentors, etc. to address the psycho-social as well as career guidance needs of the students. The universities should also promote students' clubs and societies as well as help students establish social networks both within and without campus which are instrumental in the development of life skills.

Credit author statement

Dr Benjamin Bizimana: Formal analysis.
 Dr Irénée Ndayambaje: Conceptualization.
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Declaration of competing interest

None.

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