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Evidence from First Week Lectures at the University of  
Ghana**

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**Abstract**

The paper identifies the reasons underlying the abysmal attendance of lectures in the first week of lectures among undergraduate students of the University of Ghana, assesses its impact on academic performance and prescribes coping mechanisms. Primary data were collected from fifteen residential halls by means of stratified sampling technique. A logistic regression model was used to determine the likelihood of a student absenting himself/herself from first week lectures. In addition, we employ a cross-sectional regression to determine the impact of first week absenteeism on student academic performance. The results suggest that first week absenteeism was highly present among students who are not bothered and do not see the need to attend first week lectures. Older students and students who are occupied with other activities are 1.2 times and 3.9 times respectively more likely to miss first week lectures. Grade Point Average is negative but insignificant in determining student absenteeism. However, the cross-sectional regression depicts that first week absenteeism has a significant negative impact on academic performance of a student.

**Keywords:** Absenteeism, academic performance, cross-sectional regression, logistic regression, stratified sampling.

## Introduction

University of Ghana is the premier university of Ghana. The University has produced many prominent people for Ghana and the rest of the world among who are three presidents, out of eight democratically elected presidents, with the current president being an alumnus of the University. It is among the top ranked universities in Africa attracting large number of international students yearly into the various programmes the university offers. With over 40000 students, the University offers programmes in liberal arts, social sciences, basic and applied sciences, agriculture, medicine and engineering. In the 2014/2015 academic year, the University adopted the collegiate system and now has all its schools and departments categorized under four colleges namely, College of Basic and Applied Sciences, College of Humanities, College of Education and College of Health Sciences. This new development is part of the University's 2014-2024 strategic plans to distinguish itself in research to make impact at the national and international level.

One of the good indicators of a first-class university is the quality of students it churns out in the public space. Its products make positive impact in any environment they find themselves; be it the private sector, government or non-governmental organizations. There is, however, a worrying trend emanating from the university: namely a large number of undergraduate students do not show up for lectures during the first week any time school reopens. This trend is not only peculiar to the University of Ghana but other public universities across the country. This problem has persisted and exacerbated over the years. Attending lectures is a basic requirement in the University of Ghana and the University has put in place policies to discourage being absent from classes. However, when class size is usually large, it becomes difficult if not impossible to enforce policies. For the University of Ghana to continue to retain its place as one of the top universities on the continent, this attitude must be curbed. The potential of this attitude, if no antidote is found, may not only extend into other weeks within the semester but can be carried over to the master programmes run by the University and affect the quality of students churned out of the University.

Quite a number of research works (Gottfried, 2010; Crede, Roch, Urszula & Kieszczyńska, 2010; Aden, Yahye & Dahir, 2013; Komakech & Osuu, 2014; St. Clair, 1999) have focused on the effect of chronic absenteeism and truancy on performance leaving room for research to be carried out on the impact of first week absenteeism on the academic performance of university students. As suggested by several authors (Aden, Yahye & Dahir, 2013; Crede, Roch, Urszula & Kieszczyńska 2010), attending lectures and class participation is one of the key components of achieving positive academic results. According to Crede, Roch, Urszula & Kieszczyńska (2010), attending lectures provides students with varied information and practical demonstrations with examples that are not available in text books. Examination questions most often reflect classroom discussions and class contributions. In essence, these activities aid in the better retention of information by students leading to higher exam scores. It therefore becomes necessary to have in place mechanisms needed to monitor student attendance even at the early stages so as to reduce the risk of poor academic performance. As noted by Ginsburg, Jordan and Chang (2014), the problem of absenteeism can be curbed when stakeholders come together to monitor and implement policies at early stages (whether at the commencement of the academic year or at the beginning of educational career of a child) of absenteeism. Fayombo, Ogunkola and Olaleye (2012) also found that absenteeism at the early stage of a student's educational career has negative impact on performance as the student is at risk of not gaining fundamental skills needed for academic progression. The authors also found that absenteeism adds up. Consequently, there is the need to put in place measures to combat this attitude at the very early stage to preserve the standard the University has worked so hard over the years to attain.

There are number of important questions the study wishes to find answers to. What are students communicating to the University for being absent in the first week of lectures? What is the likelihood that a student grade point will be affected by missing the first week of lectures? What is the likelihood that a student will miss the first week of lectures because of his or her financial status? What is the likelihood that a student will not show up for lectures because he/she expects University not to be fully set for classes in the first week? What other characteristics can be identified with students that miss first week of lectures? Finding answers to these questions will assist the University management to put policies in place to curb this menace and reduce the risk of future academic failure of a student. Of course, it will also assist the University management in its admission process as it will get to know other characteristics associated with students that miss first week of lectures. First year students will have good example to learn from their seniors and assist strengthen the standard of the university. Eventually, the revenue that emanate from the international student enrolment will be enhanced. Thus, the objectives of the study are to determine the causes of the abysmal attendance of lectures in the first week among undergraduate students and to determine its impact on academic performance. In addition, the study seeks to find practical ways to combat first week lecture absenteeism among undergraduate students.

The rest of the paper is organised as follows. Section 2 is the literature review where we discussed issues regarding student absenteeism and academic performance relevant to the study. Section 3 is the methodology and discusses the source of data and the method employed in the analyses of the data collected. Section 4 is the data presentation and analysis whereas section 5 contains the summary, conclusion and recommendations. Finally, section 6 gives the study limitations and provides direction for further research work.

## **Literature Review**

The study of absenteeism on performance is not a new phenomenon. For several years, studies have focused on the effect of absenteeism on productivity in both academic and industrial settings. Absenteeism is one major problem that is faced by all institutions alike. Extant literature have demonstrated that absenteeism has a negative impact on performance (Gottfried, 2010; London, Sanchez & Castrechini, 2016; Balkis, Arslan & Duru, 2016). Despite this, managers are not fully aware of the exact nature of the problem and strategies are still being implemented to fight against absenteeism. In some instances, strategies to curb absenteeism have remained futile and the problem still persists. Specifically, literature on first week absenteeism among university students has not been fully developed. Previous studies (London, Sanchez & Castrechini, 2016; Gottfried & Kirksey, 2017) in this area have paid very little attention to first week absenteeism and its dire consequences. First week absenteeism from lectures among university students has become prominent and has worsened over the years. This pattern of student behaviour calls for immediate concern and has implication for policy makers and academicians.

### *Conceptual Review*

All students at one point in time and for varied reasons have the tendency to miss school. The engagement of such acts constitutes absenteeism. Student absenteeism, often referred to as chronic absenteeism is defined as a deliberate act of being away from the physical location or place where lecture is carried out whiles engaging in other alternative activities or finding

alternative use of one's time (Gottfried, 2010). Students who absent themselves from school with or without an excuse are all considered under the parasol of chronic absenteeism. London et al. (2016) emphasized on the difference between chronic absenteeism and truancy. According to the authors, truancy is that aspect of chronic absenteeism that focuses only on unexcused absences. The authors added that most educational institutions have often put in place policies that address the problem of truancy at the expense of excused absences. Furthermore, cases of chronic absenteeism have been neglected in schools and there seem not to be any data base showing records of chronically absent students. Gottfried (2009) researched into the relationship between the two facets of chronic absenteeism, excused and unexcused absences and how each impact on performance. Whitney and Liu (2017) conducted a descriptive analysis of part day absenteeism and its prevalence compared to full-day absenteeism among students in secondary schools. This study introduces a new dimension of chronic absenteeism: first week absenteeism and its implication on academic performance of students. For the purpose of this research, first week absenteeism is defined as a situation where a student absents himself from first week lectures upon reopening of school with or without an excuse.

### *Theoretical Review*

Despite the wide scope of research works on absenteeism, there has been very few attempts by researchers to theorize the concepts. Nicholson (1997) broadly categorized the theories of absenteeism into three models. The models identified are pain-avoidance models, decision models and adjustment models. According to the author, absenteeism is complex, and these models do not completely encapsulate the concept. However, the models provide some insight into the nature of absenteeism. Based on the pain-avoidance models, students may absent themselves from school as a form of withdrawal because they are dissatisfied with the experiences they face in school. The other theory is explained by decision models. Here, students are said to absent themselves from lectures based on their own rational decisions. An explanation based on decision-making theory is that students are assumed to be selfish and will make choices based on their own interests. In this regard, a student may decide not to attend lectures because he/she prefers to engage in other activities that satisfy his/her selfish interests. Another assumption here is that students have alternatives and these alternatives are mutually exclusive such that no two of them can be satisfied at the same time. In this regard, the decision of students to absent themselves from lectures is geared towards the attainment of other goals that are of more value to them. This gives rise to the utility theory where students make decisions based on alternatives that give them the highest satisfaction. A student may decide to be absent from first week lectures based on the satisfaction/value they place on attending first week lectures. In essence, students tend to choose the best alternative available to them. In some other instances, the decision of a student is not based on factors within their control but on factors outside their scope of control. These factors may either be known or unknown to the students. A known factor may depend on the background information available to the student while an unknown factor may depend on the state of nature or on the decisions of other persons. A simple example will be a student deciding not to attend first week lectures based on the likelihood of a rainfall or the quality of first week lectures. Also, a student may decide to absent him/herself from first week lectures because he/she thinks a friend will be absent. The other theory explained by Nicholson (1997) is grounded in adjustment models where absenteeism is observed as a result of an adaptive strategy to school demands.

Another theory in line with the decision models explained by Nicholson (1997) is Vrooms theory (Vroom & Yago, 1978). This theory assumes that the behaviour of individuals emanates from alternatives or choices available to them. The aim of the individual is thus, to maximize his/her satisfaction and minimize his/her pain. The main elements in the theory are expectancy, instrumentality and valence. Expectancy occurs when students have a strong belief as to whether attending all lectures within a given semester is attainable. All things being equal, a student who believes that this can be done will be motivated to attend all lectures otherwise such a student is more likely to miss lectures. Similar to the decision-making theory, students who have prior knowledge about the attainability of a task have strong expectancy beliefs. The conditions that promote expectancy include the availability of right resources and environment needed for having effective lectures. Instrumentality is the probability of connecting outcomes. A student may want to know whether attending lectures will result in being rewarded (a valued outcome). Knowing this will enable students make desired decisions. Thus, student will attend lectures based on their awareness of the relationship that exist between lecture attendance and academic performance or based on their trust and respect for lecturers in making transparent decisions on how marks are awarded. Valence is the level of satisfaction students expect to obtain from being rewarded as against the actual satisfaction they obtain when they have been rewarded. For instance, awarding marks for lectures attendance may not increase motivation for a student who is motivated by formal acknowledgment and praise. A student will be motivated to attend lectures if he/she values the expected outcome. Vrooms theory seems to suggest that the instrumentality, expectancy and valence beliefs of students interact in a manner that makes the student act in a way that maximizes his/her pleasure and minimizes his/her pain.

### *Empirical Review*

Student absenteeism has been found to have a number student outcome. Some researchers are of the view that students need to be present and involved in class activities to promote progress in class lessons being taught. By extension, more days of class attendance amount to receiving sufficient instructions from facilitators leading to more learning and academic achievement (Epstein & Sheldon, 2002). This is also the case for virtual sessions where students are required to be present and engaged in virtual studies. Proponents of this view suggest that with lower turnout in class, facilitators, students present and non-present all stand to lose (Westrick et al., 2009). Facilitators will now have to allocate extra time to coordinate the activities of student absentees to enable them catch up with the class. This time could have otherwise been used to advance class lessons. London et al. (2016) reiterate that student with high level of class attendance tend to gain important learning and development opportunities while student with low level of class attendance are often at risk of engaging in negative activities. This view is supported by Whitney and Liu (2017). The authors explained that unexcused absences expose students to high risk behaviours such as finding alternate use of one's time to engage in drugs and other social vices. Gottfried and Kirksey (2017) explained the link between poor academic performance and high absenteeism on the basis that students who absent themselves from class receive fewer hours of instructions from facilitators exposing them to unequal opportunities to learn compared to students who do not miss class. However, some researchers have opposing views.

Peters and Kethley (2002) hold that student performance is not affected by class attendance. These authors argued against mandatory policies that are aimed at promoting class attendance. Several authors have attempted to solve this debate and most of their findings seem to suggest

that class attendance has a strong and positive correlation with class grades and overall Grade Point Average (GPA). In the case of university and college students, Crede, Roch and Kieszczyńska (2010) found that there exists a strong correlation between class attendance and GPA. Aden, Yahye and Dahir (2013) also found a strong positive relationship between class attendance and academic performance of university students. In addition, Komakech and Osuu (2014) noted that student absenteeism in secondary schools is a silent killer and leads to poor academic growth and performance. Gottfried (2010) evaluated the relationship between class attendance and academic achievement of students of elementary and middle school level and found that students who attend class have higher GPAs. Balkis et al. (2016) conducted a similar study and discovered that academic achievement of students in high school is negatively related to current and previous absenteeism. Even among third to fifth grade students, Gottfried & Kirksey (2017) found that absenteeism is highly associated with poor academic performance. According to Epstein and Sheldon (2002), student who eventually drop out from school have a long-standing history of absenting themselves from school at the early age of their education as far back as first grade. This goes to reiterate the views of Fayombo, Ogunkola and Olaleye (2012) that absenteeism is cumulative in nature. Efforts to curb the high level of absenteeism among high school students should thus, focus on measures that address the issue at the elementary and middle school levels to avoid its replica effects in the future.

Existing literature have established the role of external factors such as educators, family practices and school characteristics in reducing absenteeism among students. The main challenges in determining the impact of absenteeism on academic performance are the factors underlying absenteeism. That is to say, factors that influence absenteeism vary from one environment to the other and cannot be generalized. Westrick et al. (2009) noted that the reasons for student absenting themselves from lectures were course specific. Epstein & Sheldon (2002) noted that some school practices have direct influence on the level of absenteeism present among students. Large school are more likely to face problems related to absenteeism than smaller ones. Also, when class size is large students tend to skip classes because they consider the class environment to be chaotic and not conducive for learning. Poor student-teacher interpersonal relationship is also another contributing factor to student absenteeism.

According to Corville-Smith et al. (1998), student who absent themselves from school are more likely to come from dysfunctional families compared to regular attenders. Based on their findings, absentee students often experience family conflicts and often do not favourably embrace school experiences as they feel academically inferior. This view is also supported by Epstein & Sheldon (2002). The authors noted that absenteeism among students can also be influenced by factors outside school practices. Income and educational level of parents and the neighbourhood in which students reside can all be contributing factors to student absenteeism (Balkis et al., 2016). In a study conducted by Westrick et al. (2009), the authors found that sickness, tiredness due to late learning, engagement in other activities such as preparation towards a test in another course, availability of course content in other sources are factors accounting for absenteeism. Also, students were found to be absent in courses where attendance was not taken. One other reason identified by the authors is that students absent themselves because they feel they learn much on their own than when they attend lectures.



## Methodology

This section discusses the origin of the data used for the analysis and formulates the models used for analysing the data collected.

### *Data Source*

Over 100 undergraduate students of the main and city campuses of the University were deployed for the collection of primary data for the analysis. Each of these students is mostly a member of each of the fifteen residential halls, namely Volta, Commonwealth, Legon, Akafo, Mensah Sarbah, Hill Limann, Alexander Kwapong, Elizabeth Frances Sey, Jean Nelson Aka, African Union, James Topp Nelson Yankah, Bani, International Students and Evandy of the University. Each hall has a student of all fields of study. The questionnaires were then randomly deployed to undergraduate students of the halls. There was an initial pre-testing of 60 questionnaires to identify any problems or other information we might have skipped before final roll out of the entire 760 questionnaires. We obtained about 73% questionnaires that were usable.

The questionnaire designed to solicit information from the students can be categorized into three broad types: the student characteristics questions, specific questions and remedial questions. The student characteristics questions sought information among others about the age of the student, field of study, the level of the student (i.e. whether the student is in the first, second, third or fourth year of studies), cumulated grade point average, source of finance and gender. Other student characteristics such as the type of Senior High School (SHS) attended, the grade attained at the Senior High School level and Option of the Senior High School as classified by the Ghana Education Service. Ghana education service classifies Senior High School into classes. Option 3 schools are the most sought schools and are generally perceived to be most discipline schools in Ghana. This is followed by Option 2 and then Option 1. Option 4 is the Technical High Schools and Option 5 are the privately-operated Senior High Schools.

The specific questions dealt directly with issues of absenteeism and sought to find out among others the number of times a student was absent in a given semester and their reasons for being absent. In addition, using a likert scale of 1 to 5, the specific questions also included some key variables (sickness, occupied with other activities, not bothered, financial constraint, school factors) that we believe may cause a student from absenting himself/herself from first week lectures. The remedial questions posed questions on measures that could combat absenteeism and offered students the freedom to propose ways to address the first week absenteeism.

### *Model Formulation*

We have a binary output variable  $Y$ , and we want to model the conditional probability

$$P(Y = 1 | X = x_1, X = x_2, \dots, X = x_k)$$

as a function of  $x_1, x_2, \dots, x_k$ . Assume that  $P(Y = 1 | X = x_1, X = x_2, \dots, X = x_k) = F(X; \Theta)$  for some function  $F$  parameterised by  $\Theta$ . Let the observations  $x_i$ 's be independent of each other. The conditional likelihood function  $L$  is given by

$$L(\Theta | X) = \prod_{i=1}^n P(Y = y_i | X = x_1, X = x_2, \dots, X = x_k)$$

where the observed  $y_i$  is either 0 or 1. In a sequence of Bernoulli trials with a constant probability of success  $p$ , the likelihood function is maximised when  $\hat{p} = \bar{Y}$  where  $Y = (y_1, \dots, y_n)$ . If  $Y$  is defined by  $X$  and let  $Y$  follow the logistic distribution, we can write

$$p_i = F(Z_i) = \frac{1}{(1 + e^{-Z_i})}, i = 1, \dots, n$$

where  $Z_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_k x_{ki} + \varepsilon_i$  and  $k$  is the number of independent variables,  $\varepsilon_i$  being the error term.  $Z$  is the logit of  $p$  (see for example Lehmann and Casella (2001), pp. 26).

The binary output variable is student absenteeism. If a student has ever missed first week of lecture we assigned 1 and 0 otherwise. The independent variables used are defined for each student  $i$  as follows:

- GPA, Grade Point Average  $x_{1i}$ : this measures the performance of the  $i$ th student at any level of their undergraduate studies. A student who misses first week of lectures is likely to have his/her GPA to be affected. Therefore, we expect the coefficient of  $\beta_1$  to be negative.
- Option, option of SHS attended  $x_{2i}$ : we believe that the Option of a student should instill an inner desire to attend classes at all times. Students who attended Option 3 schools are not likely to miss first week lectures and so we expect  $\beta_2$  to be positive. We measured Option as a dummy variable: 1 for Option 3 and zero otherwise.
- SHS, SHS score for the best 6 subjects  $x_{3i}$ : the smaller the total score obtained for the best 6 subjects at SHS, the more discipline a student is and the greater the likelihood that such a student will not miss first week lectures. Therefore, we expect the coefficient of  $\beta_3$  to be positive.
- Sickness, Sickness  $x_{4i}$ : if a student is sick when school resumes, then most likely the student will miss first week of lectures. We used the mean value of the responses as a proxy for sickness and we expect the coefficient of  $\beta_4$  to be positive. We used the mean because it fair very well as an estimator of the true mean when judged by the three criteria of bias, consistency and efficiency (see Stock & Watson, 2007, 67-70).
- OWOA, occupied with other activities  $x_{5i}$ : a student who is occupied with other activities when school resume will most likely not be able to attend lectures when school resumes. We used the mean value of the responses as proxy for “occupied with other activities” and we expect the coefficient of  $\beta_5$  to be positive.
- NB, not bothered  $x_{6i}$ : if a student is not bothered when school re-opens then such a student most likely will miss first week of lectures. Here too, we used the mean value of the responses as a proxy for “Not bothered” and we expect the coefficient of  $\beta_6$  to be positive.
- FinCon, financial constraint  $x_{7i}$ : a student who has challenges getting the needed funds for his or her upkeep at school will most likely miss first week of lectures when school resumes. We used a dummy variable as a proxy for “financial constraint”. It is 1 if the mean value of responses is greater or equal to 3 and zero otherwise we expect the coefficient of  $\beta_7$  to be positive.

- SchFac, school factors  $x_{8i}$  : This refers to challenges' students perceive as hampering first week of lectures emanating from the university when school reopens. We used the mean value of response as a proxy for school factors and we expect the coefficient of  $\beta_8$  to be positive.
- Age, age of student  $x_{9i}$  : an older a student is, the more responsible a student is and the greater the likelihood of the student showing up for first week lectures. On the other hand, older students tend to be saddled with other responsibilities that stifle their class attendance. The coefficient of Age can be positive or negative.

Next, to determine the impact of first week absenteeism on academic performance, we formulate our model in the form

$$Y = X\beta + \varepsilon$$

where  $Y$  is an  $n \times 1$  vector,  $X$  is an  $n \times (k+1)$  design matrix of the student characteristics and specific questions,  $\beta$  is a  $(k+1) \times 1$  vector of parameters and  $\varepsilon$  is an  $n \times 1$  vector of residuals for  $n, k \in \mathbb{Z}^+$ . Specifically, we postulate that the academic performance of a student summarized by  $GPA$ , and related to the student characteristic and specific questions is given by the function  $f$  where

$$GPA_i = f(Absent_i, Option_i, SHS_i, Sickness_i, NB_i, OWOA_i, FinCon_i, SchFac_i, Age_i) + \varepsilon_i$$

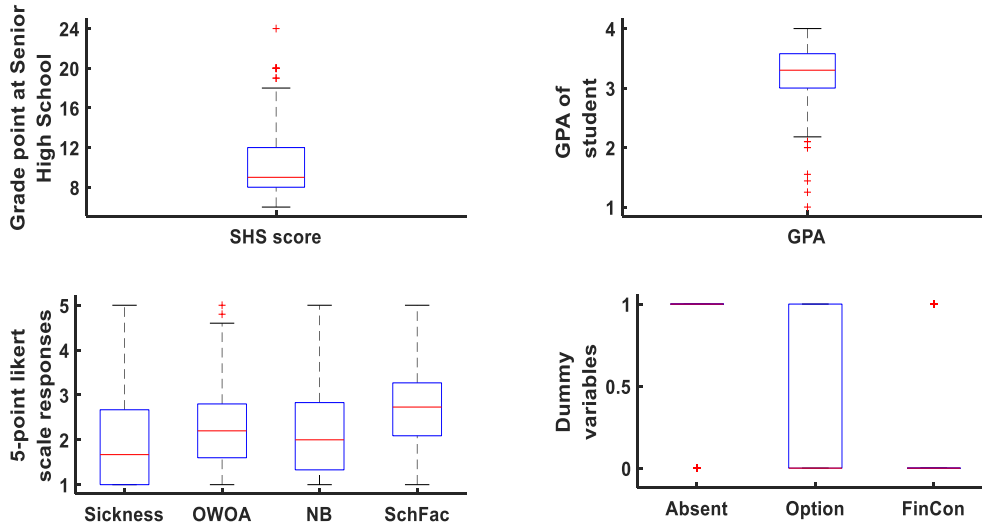
for  $i = 1, \dots, n$  where  $n$  is the number of students.

## Findings and Discussion

This section reports the analysis of the data in the form of boxplot and stacked bar chart for the reasons for first week absenteeism. The section also contains the correlation matrix, the results of the logistic and the cross-sectional regressions and the coping mechanisms to combat first week absenteeism.

*Boxplots of Primary Data Collected*

**Figure 1.** Box plots for Grade point at Senior High School level, cumulated grade point average of students, 5 point-likert scale responses on Sickness, OWOA, NB and SchFac responses from dummy variables Option and FinCon

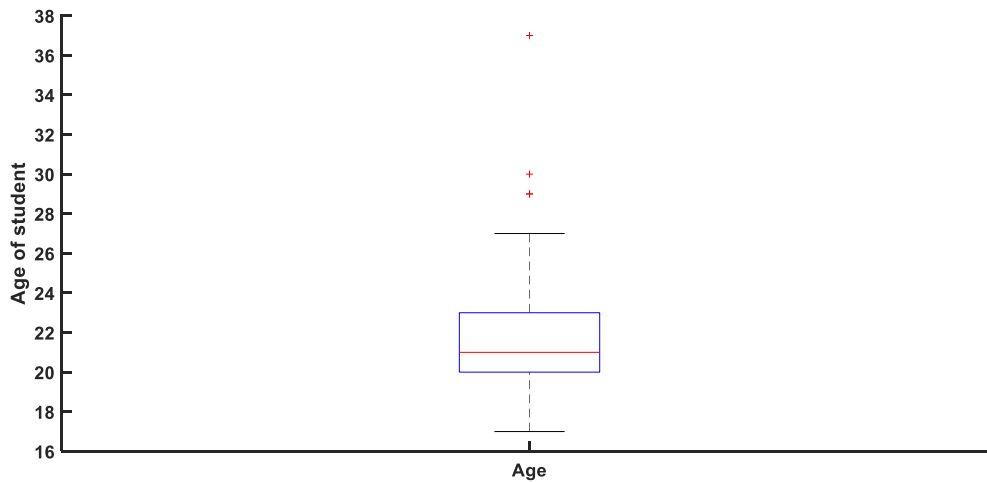


Source: Boxplots obtained from research primary data 2017.

University of Ghana admits highly qualified students into its programmes. This can be seen from the boxplot in Figure 1, upper left plot where the upper quartile of all admissions is aggregate 12. Thus about 3 out every 4 students must obtain aggregate 12 or better to gain entry. Majority of the students exhibit a high sense of responsibility towards their studies: as can be seen from the boxplot (upper right, Figure 1), the lower quartile of GPA scores is 3 (the lower boundary for second class upper division). From the lower left plot of Figure 1, majority of the students do not consider Sickness as central for missing first week lectures. The seventy-fifth percentile of responses of 2.67 is less than 3, the mid-point value on the likert scale. Likewise, OWOA and NB with respective seventy-fifth percentile values 2.8 and 2.83, are all below 3. However, SchFac has an upper-quartile value 3.27, a cause of concern for the University management. This suggests that some students do not attend lectures in the first week because they expect the University not to be ready to start lectures, for example some lecturers not showing up in the first week.

Observe from the lower right plot that majority of students have missed first week lectures in the course of their studies. The median value coincides with the maximum value of 1. Also, majority of students are not from the Option 3 Senior High Schools as the median value coincides with the minimum value of 0. The mean of responses is 35.86% and indication that a sizeable number of admissions to University of Ghana are from Option 3 schools. Finance is not a hindrance to most students in attending first week lectures. The median value coincides with 0 and the mean value of 22.52% is closer to zero. The boxplot in Figure 2 shows the ages of students who responded to the questionnaires. The ages lie in [17, 37] with the mean age 21 very close to median age 21.3.

**Figure 2.** *Boxplot of age of student*



Source: Boxplot obtained from research primary data 2017.

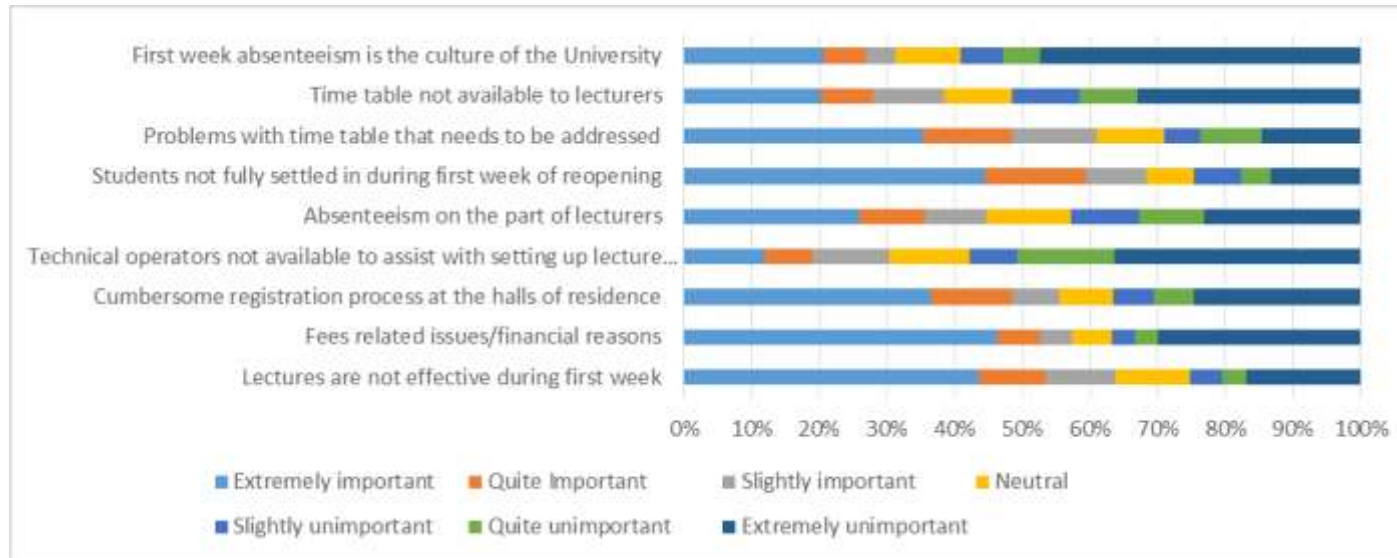
### *Reasons for First Week Absenteeism*

We posed a number of direct questions (indicated in Figure 3) to students to find their reason for absenting themselves from first week lectures. A summary of the results of their responses is represented by the stacked bar chart indicated in Figure 3.

Combining extremely important and quite important components of the stacked histogram, we see that students not fully settled for first week of lectures topped the list with approximately 60% of respondents electing this item as the central reasons for missing first week of lectures. This is followed by lectures are not effective during the first week and fees related/financial reasons with approximately 53.3% and 52.7% respectively of respondents selecting these items. The next prominent reasons broadly relate to school factors. Problems with timetable that needs to be addressed and cumbersome registration process at the hall of residence followed with approximately 48.5% of respondents electing these items.

Students not fully settled for the semester can emanate from a number of reasons. Registration has to be done before students can gain access to the halls of residence. Registration process at the halls of residence can be cumbersome and lengthy. Having to commute from home to class everyday becomes worrisome and so some students stay home until the registration is completed. Also, some students are usually not certain what courses to select from the various options available and wait a while and weigh their options and then pick the most suitable and this eventually ends up in the second week thus, missing the first week. From the stacked bar chart, we can deduce that first week absenteeism is not the culture of the university. 52.9% of the students place less emphasis (extremely unimportant and quite unimportant) on first week absenteeism as the culture of the university and hence a reason for being absent in the first week.

**Figure 3: Reasons for absenteeism**



Source: Stacked bar chat from research primary data 2017.

*Correlation Matrix with Absenteeism as Dependent Variable*

**Table 1.** *Sample correlation coefficients among the dependent (absenteeism) and the independent variables*

	<i>Absent</i>	<i>GPA</i>	<i>Option</i>	<i>SHS</i>	<i>Sickness</i>	<i>OWOA</i>	<i>NB</i>	<i>FinCon</i>	<i>SchFac</i>	<i>Age</i>
Absent	1									
GPA	-0.088	1								
Option	0.053	0.083	1							
SHS	0.081	-0.301	-0.122	1						
Sickness	-0.068	0.0473	0.023	0.042	1					
OWOA	0.142	0.0147	0.072	-0.013	0.444	1				
NB	0.154	-0.039	0.034	0.081	0.188	0.328	1			
FinCon	0.099	0.021	0.011	0.074	0.134	0.189	0.762	1		
SchFac	0.139	-0.022	-0.06	0.154	0.093	0.218	0.495	0.345	1	
AGE	0.158	-0.111	-0.069	0.161	0.012	0.069	-0.049	-0.016	-0.018	1

Source: Correlation coefficients obtained from research primary data 2017.

As can be seen in the sample correlation coefficients on Table 1 the  $Corr(Absent, GPA) = -0.088$ , though weak indicates that as student *GPA* rise, absenteeism reduces. The correlation between absenteeism and the Options, SHS, OWOA, NB, FinCon SchFac and Age are all positive.  $Corr(Absent, Sickness) = -0.068$ , is also weak and consequently there appears to be little connection between first week absenteeism and sickness. Indeed, from the boxplot of Figure 1 (lower left), majority of the students do not consider sickness as a strong reason for missing first week of lectures as the median responses, 1.67, is far less than 3.

From Table 1,  $Corr(GPA, SHS) = -0.301$  an indication that students who do well at the SHS level also tend to do well at the undergraduate level. It should be noted that students with a smallest aggregate score at the SHS level are considered as the brilliant students by the Ghanaian Education Service. Also Absent, NB, SchFac and Age correlates negatively with GPA. These are to be expected as for example, a student who misses a class loses class discussions and should affect negatively the academic performance. The Option of student, Sickness, OWOA and FinCon correlates positively with GPA.  $Corr(GPA, FinCon) = 0.021$  is nearly zero indicating virtually no relationship between these two variables.

$Corr(FinCon, NB) = 0.762$  is high, an evidence of multicollinearity and so these two variables cannot be included simultaneously in the same regression model. The correlation among the other independent variables is pretty weak and should not pose a problem with our regression model.

### *Logistic Regression*

Out of the number of logistic regressions that we run, Table 2 was elected as our best model. It had the smallest Akaike Information Criteria (AIC) among all possible combinations of the independent variables. NB (i.e. students who for one reason or the other did not see the need to attend first week lectures due to influence from friends and parents or from their personal decisions) were found to be 4.6 times more likely to absent themselves from first week lectures. As expected the coefficient of NB is positive. From Table 2, it is clear that among all the predictor variables it has the greatest likelihood of predicting first week absenteeism. OWOA (i.e. students that were occupied with other activities such as searching for accommodation, travelling, engaging in business activities, etc), were found to be 3.9 times more likely to miss first week lectures and its coefficient is positive as expected. The age of students was also found to be statistically significant in determining the probability of a student being absent from first week lectures. The result suggests that older students are 1.2 times more likely to miss first week lectures than younger students. Older students tend to have greater responsibilities: they may have families to care for, maybe combining education with work and consequently are likely to miss first week lectures. Westrick et al. (2009) however found that age and cumulative GPA are not related to the degree of absenteeism. Our study indicates that cumulative GPA is not a determinant of first week absenteeism. We interacted NB and OWOA to



see the combined effect of these variables on first week absenteeism. The result shows that the combined effect was 0.5 times less likely to cause a student to miss first week lectures.

**Table 2. Determinants of First Week Absenteeism**

Explanatory variable	Coefficient	Odds Ratio	Standard error	Z-value	Pr(>  z )	
(Intercept)	-5.4824	0.00416	1.60307	-3.42	0.000626	***
GPA	-0.33688	0.71399	0.23418	-1.439	0.150282	
NB	1.53832	4.65676	0.30554	5.035	4.78E-07	***
Age	0.19375	1.21379	0.05711	3.392	0.000693	***
OWOA	1.37256	3.94544	0.29221	4.697	2.64E-06	***
NB:OWOA	-0.53106	0.58798	0.11895	-4.465	8.02E-06	***
Significant codes	0 ‘****’	0.001 ‘**’	0.01 ‘*’	0.05 ‘.’	0.1 ‘,’	
AIC	575.84					

Source: Logit regression from research primary data 2017.

### Cross-sectional Regression with GPA as Dependent

In the quest to determine the impact of first week absenteeism on student academic performance, we run many regressions and eventually settled on the regression output depicted in Table 3. The adjusted  $R^2$  was greatest and the standard error was the least among the regression outputs. Both the Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) we computed respectively as  $-32.74$  and  $-32.68$  were least among all the regression outputs. From the regression results in Table 3, first week absenteeism significantly negatively impacts GPA. Observe from Table 3 that  $|-2.2842| = 2.2842 > 1.96$  and so the coefficient for Absent is significant. The confidence interval for Absent lies in  $[-0.6778, -0.051]$  which does not contain zero which goes to reinforce the significance of the coefficient for Absent. Thus, a student who misses first week of lectures causes a reduction of the GPA by 0.365 holding other variables constant. This finding ties in with the work of Gottfried & Kirksey (2017) who found that absenteeism among third to fifth grade students has negative impact on their performance. An interaction of Absent\*SHS score significantly impact the GPA as the confidence interval do not contain zero. It should be noted that this impact is negative as a rising SHS score connotes a worse grade. This result suggests that holding all other variables constant, students loses 0.032 of their GPA for missing first week lectures with the impact increasing for each unit increase in the SHS score.

On the other hand, the combined effect of SHS and Age significantly negatively impact GPA, though individually they do not cause any significant impact. This result suggests that as a student gets older the combined effect of SHS score leads to a reduction in the GPA by 0.005. On the whole, the independent variables account for about 10.17% of variations in the GPA of a student

**Table 3.** *Impact of first week absenteeism on academic performance*

<b>SUMMARY OUTPUT</b>						
<i>Regression Statistics</i>						
Multiple R			0.33384			
R Square			0.11145			
Adjusted R Square			0.10172			
Standard Error			0.43736			
Observations			555			
<b>ANOVA</b>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	6	13.14770	2.19128	11.4558	4.3395E-12	
Residual	548	104.82235	0.19128			
Total	554	117.970050				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	3.11967	0.52988	5.88746	6.8E-09	2.07882	4.16052
Absent	-0.36460	0.15713	-2.3203	0.02069	-0.67326	-0.05594
SHS	0.03295	0.04629	0.71188	0.47684	-0.05797	0.12387
Absent*SHS	0.03185	0.01601	1.98952	0.04714	0.000404	0.06330
Option	0.04997	0.03919	1.27476	0.20293	-0.02702	0.12693
Age	0.03613	0.02457	1.47057	0.14198	-0.01213	0.08438
Age*SHS	-0.00461	0.00212	-2.1702	0.03042	-0.00878	-0.00044

*Source:* Cross sectional regression from research primary data 2017.

The plots in the appendix (figures 4 and upper and middle plots of 5) show no apparent patterns and consequently there is no evidence of heteroscedasticity. We also checked for normality of the residuals by computing a histogram of the regression residuals. As can be seen in figure 5, lower plot (in the appendix), the residuals are approximately normally distributed.

### *Coping Mechanisms*

We posed questions to students as to the extent they believe the following remedial measures indicated in Table 4 can be effective in combating first week absenteeism. The result of the responses to those who selected agreed or strongly agreed comprise approximately 61% of entire responses is summarized in Table 4.

**Table 4.** *Measures for combating first week absenteeism*

<b>Remedial measure</b>	<b>Frequency</b>	<b>Relative frequency</b>
Lecturer-Student relationship should be improved	391	0.0981
Students should be motivated through reinforcement measures (eg. awarding marks)	375	0.0941
Improvements in school culture and facilities	371	0.0931
Lecturers should teach effectively in the first week	335	0.0841
Attendance should be collated on regular basis instead of the usual end of semester collation	331	0.0831
Maintenance of class attendance records	325	0.0816
Academic fee settlement should not be a pre-requisite for registration	313	0.0785
Class sizes should be reduced to a manageable size so as to easily track absentees	309	0.0775
Career fairs and other social activities should be carried out in the first week	276	0.0693
Seminars should be carried out to educate students on the importance of school attendance	268	0.0673
Orientation programmes should stress more on the sanctions of absenteeism	241	0.0605
Sanctions on absenteeism should be included in the schools manual/Bible	240	0.0602
A committee should be set up to follow up on students who miss lectures	210	0.0527
<b>Totals</b>	<b>3985</b>	<b>1</b>

*Source:* Computation from research primary data 2017.

Other dominant remedial measures proposed by students were availability of timetable before re-opening, reduction in the steps involved in completing academic and residential registration, allocation of rooms to students before vacation and lecturers should avoid the repetition of what is taught in the first week.

To get further insight into the items that topped the list we had focused group discussions with various groups of students. From Table 4, Lecturer-Student relationship tops the list of measures that students believe when improved will enhance class attendance in the first week. One way to improve in this area as a lecturer is to learn the names of the students as fast as possible. Once the student knows that the instructor knows their names they comport themselves well, feel at ease in class and a bond develops between the student and the lecturer. Even though it may take some time to do this for a large class, it assures the students that the lecturer has an interest in their success. When a student is called by name and made to express his or her opinion on an issue, they feel valued and they are willing to participate in class discussions. Instructors should as much as possible avoid favouring certain students at the expense of others. All students should have equal opportunity to participate in assigned task. The use of threats to enforce rules and regulations should be avoided as much as possible. Rather, the benefits of conforming to rules and regulations should be emphasized. Threats more often than not, put fear in students and results in dislike for the lecturer and the course he/she teaches. Lecturers should

as much as possible, make themselves available for consultation on the time indicated in the course outlines. Mid-term evaluations of how the delivery of the course has fared will assist the lecturer to possibly rectify topics that majority of the student struggle to comprehend.

Awarding marks for participating in class discussion and attending lectures with greater weight assigned to first week lecture attendance will motivate students to show up for lectures not just for first week but at all times. In some departments, the facilities needed for lectures to kick start smoothly are not readily made available in the first week. Teaching material such as markers, stationery, pointers for projectors, etc may not have been purchased and these are disincentive for lecturers to show up for lectures in the first week and/or teach effectively. Effective teaching can only be conducted when the needed items for teaching are available. Collation of class attendance should be on a weekly basis. First week class attendance should be posted on the department's notice boards and the loss marks for absenteeism indicated. Parents that can afford to pay their wards academic user fees for the entire programme of study or ahead should be encouraged. This will make funds available to the University for its operations so that the requirement of academic fee settlement before registration can be relaxed. Large class size makes tracking of absenteeism difficult. For this reason, class size exceeding 60 have to be divided into two. This may entail the provision of more classrooms and the hiring of additional lecturers to improve the quality of class engagement.

### **Summary, Conclusion and Recommendations**

GPA is not a significant determinant of first week absenteeism. Financial constraint, SHS score, Option of school attended, Sickness and SchFac are also not significant determinants of first week absenteeism. NB being significant call for interesting activities to psyche the student up a week prior to reopening. Career fairs and other social activities should be carried out in the week prior to reopening. Mandatory refresher course can be instituted by the University management at least a day prior to reopening for which marks are awarded for attendance. This will prepare the minds of the students to take up first week of lectures seriously. Age is a significant variable in determining first week absenteeism. The government of Ghana can provide some financial support to older students with children who choose to further their education as it pertains in other countries. This will free the financial burden of the older students so that they can focus on their studies. OWOA is also a significant determinant of first week absenteeism. As alluded to above, interesting activities organized in the week prior to reopening will refocus the energies of these young people towards their academic work. The negative impact of first week absenteeism on academic performance should be echoed by lecturers in the course of their work to students. Seminars should be incorporated in the social activities educating students on the importance of attending classes at all times. This will ring a bell in the minds of the students to be present for first week lectures. Improving students' relationships with instructors has an important and long-lasting implication for both students' academic and social development. Students who have close,

positive and supportive relationships with their teachers attain higher levels of achievement than students who do not. If the University wants to create a myriad of achievers for Ghana and the rest of the world, it is important that lecturers manage this relationship very well.

The University should ensure that the support system for lecturers work efficiently. This means adequate funds should be made available to departments on time to ensure that the needed teaching materials are procured and distributed at least a week before reopening. These will motivate lectures not to just show up in the first week but teach effectively. Government has a role to play by ensuring that subventions needed by the Universities to run smoothly are done on timely basis. With the implementation of the free senior high school by the ruling government, availability of funds to meet higher education will be crucial. We call on the government of Ghana to institute a compulsory tertiary education insurance policy for which all parents must acquire for their children. This will ensure that large pool of funds is available for the tertiary education students to cater for their financing needs.

### **Study Limitations and Direction for Further Research**

The study is limited to the University of Ghana and could be extended to cover the entire public universities across Ghana. Is the privately-operated university experiencing the same abysmal attendance in the first week? The over 100 undergraduate students deployed for the collection of data from the hall of residences emanate from the University of Ghana. There could be the tendency of some students not to randomly distribute the questionnaires within the halls as instructed. A number of lecturers do not show up for lectures in the first week for one reason or the other. Are most students not showing up for first week lectures because they expect lecturers not show up in the first week? The boxplot suggests that this maybe the case, but it will be interesting to do a further in-depth study to find from the lecturer's perspective as well. The study focused on first week of lectures, but a semester comprises thirteen weeks. Some students may miss first week lectures but attend the rest of the lectures. Others may attend first week and miss other lectures. How do these numerous permutations of absences contribute to academic performance of a student? Which of the thirteen weeks lectures missed have the greatest impact on academic performance of a student? Finding answers to these would let a student determine the cumulative effect of absenteeism on their academic performance. Is first week absenteeism pronounced among students of certain programmes? Finding answers to these questions will allow corrective measures to be programme targeted. Are there other smart ways of collecting academic fees without using it as a pre-requisite for registration? These are areas that can be further researched.

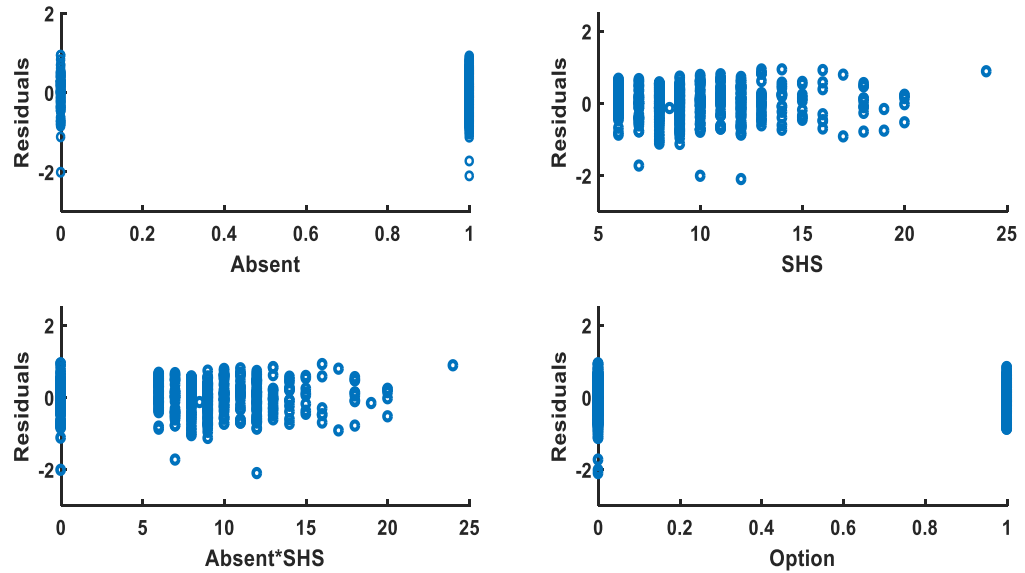
### **References**

- Aden, A. A., Yahye, Z. A., and Dahir, A. M. 2013. The Effect of Student's Attendance on Academic Performance: A Case Study at Simad University Mogadishu. *Academic Research International*, 4(6): 409 – 417.

- Balkis, M., Arslan, G., and Duru, E. 2016. The school absenteeism among high school students: Contributing factors. *Educational Sciences: Theory & Practice*, 16, 1819–1831.
- Corville-Smith, J., Ryan, B. A., Adams, G. R. and Dalicandro, T. 1998. Distinguishing Absentee Students from Regular Attenders: The Combined Influence of Personal, Family, and School Factors. *Journal of Youth and Adolescence*, 27(5): 629-640.
- Crede, M., Roch, S. G. and Kieszczynka U. M. 2010. Class Attendance in College: A Meta-Analytic Review of the Relationship of Class Attendance with Grades and Student Characteristics. *Review of Educational Research*, 80(2): 272–295.
- Epstein, J. L. and Sheldon, S. B. 2002. Present and accounted for: Improving student attendance through family and community involvement. *The Journal of Educational Research*, 95(5): 308- 318.
- Fayombo, G. Ogunkola, B. and Olaleye (2012). Cross Institutional Study of the Causes of Absenteeism among University Students in Barbados and Nigeria. *Journal of Educational and Developmental Psychology*. 2(1):112- 136.
- Ginsburg, A. Jordan, P. and Chang, H. 2014. *Absences Add Up: How School Attendance Influences Student Success*. New York: The National Center for Children in Poverty, [www.attendanceworks.org](http://www.attendanceworks.org)
- Gottfried, M. A. and Kirksey, J. 2017. When Students Miss School: The Role of Timing of Absenteeism on Students’ Test Performance. *Educational Researcher*, 46 (3): 119 –130.
- Gottfried, M. A. 2009. Excused Versus Unexcused: How Student absences in elementary school affect academic achievement. *Educational Evaluation and Policy Analysis*, 31(4): 392-415.
- Gottfried, M. A. 2010. Evaluating the Relationship between Student Attendance and Achievement in Urban Elementary and Middle Schools: An Instrumental Variables Approach. *American Educational Research Journal*, 47(2): 434–465.
- Komakech, R. A. and Osuu, J. R. 2014. Students’ Absenteeism: A Silent Killer of Universal Secondary Education (Use) In Uganda. *International Journal of Education and Research*, 2(10):417-438.
- London, R. A., Sanchez, M. and Castrechini, S. 2016. The Dynamics of Chronic Absence and Student Achievement. *Education Policy Analysis Archives*, 24(112).
- Lehmann, E. L., and Casella, G. 2001. *Theory of Point Estimation*. Second edition, Springer, pp 26.
- Nicholson, N. 1997. Absence Behaviour and Attendance Motivation: A Conceptual Synthesis. *Journal of Management Studies*, 14(3): 231–252.
- Peters, M., and Kethley, B. 2002. The Relationship between Homework and Performance in an Introduction to Operations Management Course, *Journal of Education for Business*, 77(66): 340-344.
- St. Clair, K. L. 1999. A Case against Compulsory Class Attendance Policies in Higher Education. *Innovative Higher Education*, 23, 171–180.
- Stock, J. H., and Watson, M. W 2007. *Introduction to Econometrics*. Second edition, pps 67-70.
- Vroom, V. H., and Yago A. G. 1978. On the Validity of the Vroom-Yetton Model. *Journal of Applied Psychology*, 63: 151-162.
- Westrick, S. C., Helms, K. L. McDonough, S. K. and Breland, M. L. 2009. Factors Influencing Pharmacy Students’ Attendance Decisions in Large Lectures. *American Journal of Pharmaceutical Education*, 73(5) Article 83.
- Whitney, C. and Liu, S. 2017. What We’re Missing: A Descriptive Analysis of Part-Day Absenteeism in Secondary School. *Educational Researcher*, 3(2):1-17.

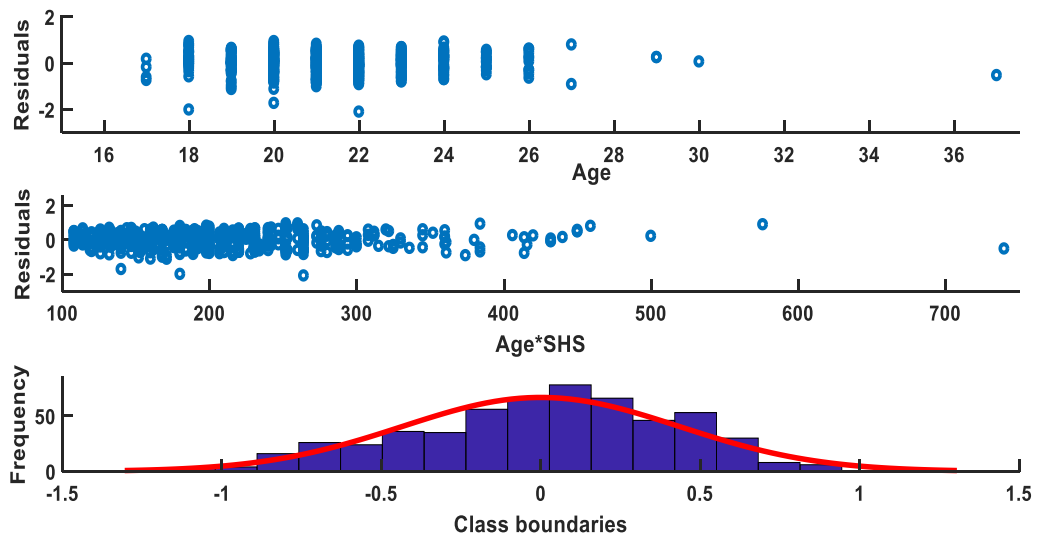
**Appendix**

**Figure 4.** Plot of residuals against the variables: *Absent*, *SHS score*, *Absent\*SHS* and *Option*



Source: Plot of residuals from research primary data 2017.

**Figure 5.** Plot of residuals against the variables: *Age* and *Age\*SHS* and graph of Normality of residuals



Source: Research primary data 2017