**Ashesi University College**

# Investigating the Association between Emotional Intelligence and Socioeconomic Status of Ashesi University College Students

By

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# DECLARATION

I hereby declare that this undergraduate thesis is my original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature _____

Candidate's Name _____

Date : 17th April, 2017.

I hereby declare that the preparation and presentation of this undergraduate thesis was supervised in accordance with the guidelines on supervision of theses established by Ashesi University College.

Supervisor's Signature _____

Supervisor's Name _____

Date : _____

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## ABSTRACT

This paper seeks to investigate an association between the socioeconomic status and emotional intelligence of students in Ashesi University College. It has been categorised into five different chapters—chapter 1 introduces the topic; chapter 2 establishes a theoretical framework and reviews similar studies conducted by other researchers; chapter 3 explains the methodology used; chapter 4 analyses the data collected; and chapter 5 describes the conclusions and recommendations made.

Using Ashesi University College as the background of the study, a sample size of 127 was used—this includes 125 students and two Deans of Students. While questionnaires were administered to the students, the Deans of Students were interviewed. Given four different hypotheses, the data retrieved was analysed using content analysis, analysis of variance, chi-squared test of independence, and a t-test.

Results showed that although there is no significant association between the socioeconomic status of students and their level of emotional intelligence, students with poor socioeconomic status are more emotionally intelligent than the others. Unlike students' ability to motivate themselves, it appeared that the other components of emotional intelligence— level of self-awareness, managing emotions, empathy and social skills of students does not change throughout their 4 years stay in the school.

It is recommended that the school extends the programs it organises for students in first year across the other levels for all differences to be permanently bridged. Also, the school should adopt a strategy that emphasizes other factors that may contribute to higher academic performance such as expanding its mentorship program.


**Keywords: s**ocioeconomic status, emotional intelligence, academic success, cognitive

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# CHAPTER 1: INTRODUCTION

## *1.1 Research Motivation*

Students, teachers, and parents often attribute academic success to a cognitive measure of intelligence (i.e. intelligence quotient). The term intelligence quotient (IQ) is a "score derived from standardized tests developed to measure a person's cognitive abilities in relation to their age group" (Science Daily, 2016). In the past years, academic success of students has been attributed to their IQ. However, Valter Viglietti (2013) contends that IQ has only been exaggerated. According to an article by the London Business School, most people are perhaps familiar with incredibly bright students but who do not succeed academically. Similarly, there are incredibly intelligent workers who cannot get ahead in their companies (London Business School, 2010).

A scenario that occurred in Cambridge sought to explain why Viglietti ibid argued that IQ has been overstated. In the case, a 16 year old student participated in the Cambridge O Level Examination and attained 7As and 2Bs out of nine subjects. After conducting an intelligent quotient test recently, it was revealed that the student scored below average. This calls into question, does IQ still remain the basis for academic success? If no, what factor(s) may be critical to the academic success of students?

Likewise the scenario above, it was indicated in observations and interactions with a about 15 students of Ashesi University College—the population for this study, that at least the first two months after student enrolment was a struggle for most students. This was partly because of the challenges students faced in fitting well into a new environment and a different culture in order to be productive. Ashesi has in its efforts provided amazing professors and smaller class sizes for effective learning, and admits most of its students depending on higher

academic performance. Yet, it appeared that the students' intellectual capabilities and the other available factors alone could not guarantee their success in academic work. As such, this prompted the author of this study to question whether the issue could be one of emotional intelligence (EQ) or the different socioeconomic status of the students.

### *1.2 Background*

Although it appeared in a research conducted in Nigeria that the level of academic achievement of students is significantly influenced by the type of school attended, the quality of teachers, and individual differences constituting intellectual capabilities and personality of the individual, this does not fully hold given the Cambridge case and the observations at Ashesi. (Oredein, 2016). Alternatively, researchers have identified other possible factors that influence success in academic performance at school. A study conducted by Steven Rivkin (2005) indicated that little does the quality of teachers and type of school attended contribute to the academic success of students but the complete family and community one belongs to (Rivkin, 2005). This means that the qualified professors and smaller class sizes Ashesi offers marginally contributes to students' academic success. Other studies have supported Rivkin's argument by indicating that neither is one's IQ nor the type of school attended and teachers critical to the academic success of students. However, it is often influenced by the students' emotional intelligence and socioeconomic status.

In 2007, Katherine Magnuson furthered Rivkin's study. The findings from the study showed that the socioeconomic status of a parent can either destroy or enhance the quality of relationship required of a parent to influence the development of a student's academic self-efficacy. This, in turn, affects the student's academic performance (Magnuson, 2007). Azuka Obieke, a researcher who attributed emotional intelligence as a critical factor to academic success, conducted a similar research in Nigeria. In this study, it appeared that there is a

positive relationship between emotional intelligence and academic achievement of college students (Obieke, 2012).

Emotional Intelligence (EQ) is a collection of non-cognitive abilities, capabilities, competencies and skills that affect perception, use, understanding, and regulation of emotions (Encyclopaedia of Human Relationships, 2009). The concept was introduced by Peter Salovey and John D. Mayer to propose an explanation to the differences in people's ability to use an emotion-related information to enhance thinking and problem solving (Encyclopaedia of Human Relationships, 2009). In 1995, Daniel Goleman agreed with Salovey and Mayer and popularized emotional intelligence as a competency that seeks to develop self-awareness, self-motivation, empathy, management of emotions, and social skills (Goleman 1995).

As part of the five competencies that makes up emotional intelligence, *self-awareness* refers to the ability to identify and name one's emotional state and to understand the link between emotions, thoughts, and actions; *self-motivation* is the ability to enter into an emotional state at will associated with a drive to achieve and be successful; *empathy* is the capacity to read, be sensitive, and influence other people's emotions; *social skills*, also known as a handling relationships, is the ability to enter and sustain an interpersonal relationship; and *managing emotions* is a decisive life skill that enables individuals to handle feelings in order to bounce back at setbacks in life (Goleman, 2003). In his book, Goleman argued that

> "Most of the problems in our lives, whether childhood problems, adolescent problems, home and family problems, work situation problems or political, regional or international problems are the results of misinterpretation of the involved sentiments, feelings and emotions of the concerned individuals, group of individuals, society, and the nations" (Goleman, 1995).

This framework makes emotions critical to thoughts, decision-making, and individual success than it is commonly acknowledged.

However, research indicates that inasmuch as academic success can be influenced by emotional intelligence, there is also an established relationship between one's level of emotional intelligence and the socioeconomic status of the individual. In the sense that, the stress from childhood poverty imbeds itself in the brain, with lasting implications on the adult's ability to regulate emotions (Beck, 2013). Hence, possible to affect one's academic success. The American Psychological Association defines the socioeconomic status of people as the "Social standing or class of an individual or group that is often the combination of education, income, and occupation" (American Psychological Association, 2016). This implies that poor socioeconomic status can result in inequities in access to resources, issues related to privileges, power, and control.

Just as Beck's argument, Eric Jenson (2009) argued in his article "*Teaching with Poverty in Mind*" that there tend to be a higher prevalence of depression, inadequate health care and decreased sensitivity which later results in poor school performances and behaviour of young people in impoverished families. Alternatively, a psychologist and social scientist, Dacher Keltner opposes that "The rich are really different and not in a good way" (Keltner, 2011). According to Keltner (2011), the life experiences of the rich result in being less empathetic, less altruistic, and generally more selfish, making it difficult for them to attain a higher level of emotional intelligence (Alexander, 2011).

### *1.3 Research Gap*

In addition to the studies stated above, other related studies have been conducted in Nigeria, Malaysia, Pakistan, India, and United States to mention a few. However, the author of this study identified that most of these studies aimed at establishing a relationship between

academic achievement and emotional intelligence, with a few focusing on the relationship between socioeconomic status and academic achievement. In this study, the author attempted to investigate the association between socioeconomic status and emotional intelligence, and how this influences the academic success of students in Ghana—a study which has not been conducted yet.

### *1.4 Research Relevance*

Emotional intelligence, unlike intelligence quotient has been identified by Daniel Goleman as that which addresses major important abilities that measure how well individuals do in life (Goleman, 1995). Emotional intelligence includes the competencies to manage oneself and that of others. Also, given that the development of individuals begins from their environment of upbringing and exposure, this study is aimed at identifying whether the different socioeconomic status of these individuals may influence their growth, awareness, self-motivation, self-management, and empathy and relationship management. Goleman (1995) argues that emotional intelligence can be learned. Therefore, this study can be used as a strategy for schools to support students to attain higher academic performance.

### *1.5 Research Objective*

This study seeks:

- To investigate the association between the socioeconomic status of students of Ashesi University College and their level of emotional intelligence
- To determine the effect the two variables have on the academic performance of the students of Ashesi University College
- To determine if emotional intelligence of students can be improved overtime.

Hypothesis Statement

This study had one major hypothesis statement, and three other sub-hypothesis drawn from the results. It has been arranged in that order below:

a. $H_0$: There is no association between the EQ level of Ashesi University College students and their socioeconomic status.

   $H_1$: There is an association between the EQ level of students in Ashesi University College and their socioeconomic status.

b. $H_0$: There is no association between the academic success of students in Ashesi University College and their level of socioeconomic status.

   $H_1$: There is an association between the academic success of students in Ashesi University College and their level of socioeconomic status.

c. $H_0$: There is no association between the academic success of students in Ashesi University College and their level of EQ.

   $H_1$: There is an association between the academic success of students in Ashesi University College and their level of EQ.

d. $H_0$: The level of emotional intelligence of an Ashesi University College student remains unchanged after 4 years of schooling.

   $H_1$: The level of emotional intelligence of an Ashesi University College student changes after 4 years of schooling.

Research Questions

a. How does the socioeconomic status of an Ashesi University College student affect his or her level of emotional intelligence?
b. What effect does the association (if any) have on the academic performance of freshmen and seniors?

c. Can the level of emotional intelligence of students of Ashesi University College be changed over time?

### *1.6 Methodology*

The methodology explains the research design used, the different approaches that were used in collecting data from respondents, the type of sampling method, how the data were analysed, as well as tools and techniques used for the analysis.

Ashesi University College was used as the background and population of the study. It is a four-year undergraduate private, non-profit liberal art university in Ghana. It has been in existence for the past 15 years with students from over 30 different countries and offers six different majors. With support from the MasterCard Foundation Scholarship program and grants from individuals and organizations, the school has awarded over $5million significant need-based financial support to qualified students since its inception in 2002 (Ashesi University College , 2016). Prior to enrolment, these qualified students become eligible to full or partial financial support to cover their tuition fees, textbooks, housing, and meals. It currently has a total population of 781 students. 55% of this population is on scholarship of which 29% are on a full scholarship and the remaining 26% on partial scholarship (Ashesi, 2017).

A mixed research was employed to expand the scope of understanding the research problem. The quantitative approach involved collecting data based on precise measurements using structured and validated data collection instruments such as closed-ended items in a questionnaire, and rating scales and behaviour responses. Out of the population, a total sample size of 125 first and fourth year Ashesi students were selected using the cluster random sampling. Given that this study is a case study, it will be inadequate to generalize

results from the quantitative analysis. However, it will guide the investigator to debunk or accept the null hypotheses.

The qualitative approach on the other hand includes collecting data such as in-depth interviews, participant observation, and opened-ended items in a questionnaire. Unlike the quantitative approach, the aim of the qualitative approach is not to generalize but provide insights to the viewpoint of the Deans of Students interviewed. Two Deans of Students were also interviewed.

To analyse the responses, analysis of variance (ANOVA), t-test analysis, and content analysis was conducted. While ANOVA was used to analyse the variables, emotional intelligence and socioeconomic status, the t-test analysis was used to analyse the possibility of an improvement in EQ over the four years of study in Ashesi. The content analysis on the other hand was used to analyse the interviews conducted on the Deans of Students of Ashesi University College.

### *1.7 Thesis Organization*

The information below indicates an overview of the paper:

- **Chapter 1: Introduction**

This chapter introduces the reader to the study conducted and provides a brief background of the topic for the study. It constitutes the motivation for undertaking the study, the background, the purpose and relevance of the research, the underlining theoretical framework, and a brief summary of the methodology. It also outlines and introduces other sections in the paper.

- **Chapter 2: Literature Review**

Guided by theoretical frameworks, the literature review captures related studies conducted on the research topic. It provides a context for the study and has the potential of convincing readers of the legitimacy of the study by providing logical and empirical support. The literature review also helps to critique studies conducted by other researchers and identify gaps in the literature.

- **Chapter 3: Methodology**

The methodology explains the research design used, the different approaches that were used in collecting data from respondents, the type of sampling method, how the data were analysed, as well as tools and techniques for the analysis.

- **Chapter 4: Data Analysis and Findings**

Based on the hypothesis statements in the methodology section, analysis of variance, chi-squared test of independence, t-test and content analysis were used to analysis the responses from the questionnaires administered and the interviews conducted. The statistical tools used were R Studio and Excel

- **Chapter 5: Limitations, Conclusion and Recommendation**

In this chapter, a summary of the results from the analysis was given and the limitations were stated. Also, conclusions were drawn and some recommendations were made to Ashesi University College and its students.

# CHAPTER 2: LITERATURE REVIEW

## *2.1 Introduction*

Students begin university with high hopes of academic success, and institutions see academic success of students as a core purpose. This study explores the association between the socioeconomic status of Ashesi University College students and their level of emotional intelligence. To answer the research question—"How does the socioeconomic status of Ashesi students influence their level of emotional intelligence", the author sought to analyse the null hypothesis that "There is no association between the EQ level of Ashesi students and their socioeconomic status".

In this chapter, a review was conducted on two underlying theories guiding the study. Research articles by other authors on emotional intelligence, academic achievement, socioeconomic status, and the measuring instruments such as the Emotional Intelligence Inventory Scale (EIS) were also critiqued.

## *2.2 Theoretical Framework*

This study aims to bring together two important theories. That is, Goleman's theory of emotional intelligence (1995) and Jensen's "Teaching with Poverty in Mind" (2009) to better understand the role socioeconomic status and emotional intelligence may play in academic success.

Eric Jensen in his book *"Teaching with Poverty in Mind"* explains that socioeconomic status forms a significant part of an individual's emotional behaviour. According to Jensen (2009), children raised in poverty rarely choose to behave differently but are daily faced with overwhelming challenges that affluent children never have to confront. Their brains have adapted to suboptimal conditions in ways that undermine good school performance. Hence, these children are likely to be involved in major risk factors including emotional and social

challenges, acute and chronic stressors, cognitive lags, and health and safety issues (Jensen, 2009).

Accommodating Jensen's argument, Goleman explains that "To have a high level of emotional intelligence, one must be more in control of and be able to manage his/her self-awareness, self-motivation, self-management and social skills" (EBA, 2016). He also explains that having a high level of emotional intelligence does not guarantee an individual the skills required to be an excellent student academically or best performer at work, but the potential to learn such skills (Goleman, 1998). Below is a diagram that summarizes the theory:

Components of Emotional Intelligence (EQ)


***Source:*** *(Alder & Heather, 2006)*

Self-awareness and self-management boost personal competencies. Given one's vision, values, and beliefs, *self-awareness* helps individuals to build self-confidence by recognizing their emotions and their effects and taking an accurate assessment of themselves to identify

strengths and limits. *Self-management*, on the other hand, builds self-motivation and self-regulation and helps to develop self-control, trustworthiness, conscientiousness, adaptability and innovation (Goleman, 1998). Thus, it empowers the individual, increases resilience, decreases stress, increases satisfaction, increases intuition/insight, and results in self-fulfilment/actualization (Hauz, 2005). Social awareness and relationship management, on the other hand, builds one's social competencies. While *social awareness* provides one with the understanding that drives achievement, commitment, initiative and optimism, *relationship management* helps to co-operate, collaborate, build rapport, make better decisions, make more meaningful connections, influence, and improve team capabilities.

Goleman's (1995) theory of emotional intelligence is significant to this study since it is specific to work performance based on social and emotional competencies. It is believed that students in Ashesi and all over the world come from different backgrounds with different socioeconomic status. Therefore, as students meet people from all walks of life, their academic success is likely to be influenced by the society and their emotions. The American Psychological Association (2016) explains that poor socioeconomic status results in inequities in access to resources, issues related to privileges, power, and control. Hence, placing individuals with good socioeconomic status in leadership or higher positions over those with poor socioeconomic status.

According to Goleman (1998), many research reviews has shown that the more senior a leader, the more developed is the leader. Also, this finding combined with further research supports the notion that those in higher positions within the organizational hierarchy often demonstrate higher levels of self or other discrepancies (Goleman & Emmerling, 2003). The investigator then questions, "Can this be applied to Ashesi students as well? Do the students' level of education (i.e. 100 or 400) determine their level of emotional competencies

regardless of their socioeconomic status?" Given the differences in socioeconomic status of students, Goleman's "competency" based approach emphasized the identification of competencies that can be used to predict academic performance of these students. Thus, the model reflects an extension, refinement, and reconceptualization of previous research and theory in an effort to better understand complex affective processes in order to predict relevant criterion in terms of performance (Emmerling & Goleman, 2003). Per Jensen's argument, these competencies of emotional intelligence can be affected largely by one's socioeconomic status.

### *2.3 Historical Perspective of Emotional Intelligence*

Emotional intelligence is one of the recent developments in the area of intelligence. In 1990, the concept of emotional intelligence was proposed by Peter Salovey and John Mayer of University of New Hampshire as a merger between emotions and intelligence. The psychologists defined the model as "the ability to manage one's own and others' feelings and emotions, to discriminate among them and use this information to guide one's thinking and actions" (Mayer & Salovey, 1990). The model proposes the assumptions that intelligence must reflect actual mental performance rather than preferred behaviour patterns, self-esteem, or other constructs more appropriately labelled traits; the proposed intelligence should describe a set of related abilities that can be shown as conceptually distinct from established intelligence; and an intelligence should develop with age (Goleman & Emmerling, 2003).

However, Daniel Goleman popularized this theory in 1998 after publishing his first book title *'Working with Emotional Intelligence'*. Unlike Salovey and Mayer's model that offers only two domains (self-management and social awareness), Goleman's model offers five major domains including self-motivation, self-awareness, empathy, managing and social skills. These serve as the foundation for learned abilities or competencies that depend on the

underlying strengths in the emotional intelligence domain (Goleman & Emmerling, 2003). Not only does Goleman's model seek to develop a theory of performance based on social and emotional competencies, it allows greater effectiveness in any organization or workplace, as against Salovey and Mayer's model that only seeks to establish the validity and utility of a new form of intelligence.

To ensure the accuracy of results and findings for this study, Goleman's model was significant. This is because it is specific to the domain of performance unlike Salovey and Mayer who framed their model as general and applicable in a wide range of setting including clinical assessment. Also, it can accurately measure how one's socioeconomic status can influence his/her emotional intelligence, and how this affects the level of effectiveness at school and in the workplace.

### *2.4 Emotional Intelligence and Academic Performance*

Since the development of this model, many researchers have conducted studies that investigate the relationship between emotional intelligence and variables such as academic achievement. In Malaysia, Chew *et al* (2013) conducted a study on the effect of emotional intelligence on the academic performance of the first year and final year medical students. However, this study seeks to investigate the association between emotional intelligence and socioeconomic status, and the effect of this relationship on the academic achievement of Ashesi students. Chew *et al* used only medical students as the population but the study under investigation consider the entire student body of Ashesi University College. Similar to Chew *et al's* study, questionnaires were administered, and the study was cross-sectional with first and fourth-year students as the sample. However, while Chew *et al* used the Mayer-Salovey-Caruso Emotional Intelligence Test (EIT) instrument for measuring the level of emotional intelligence, continuous assessment and final examination results for academic performance,

this study uses the Emotional Competency Inventory (ECI) scale as a measure of emotional intelligence. This is because the ECI supports Goleman's model and has proven to be very reliable given its reliability coefficient of 0.82. It also uses the cumulative Grade Point Average (GPA) to measure the academic performance of students.

Guided by Salovey and Mayer's theory of emotional intelligence, it appeared at the end of Chew *et al's* (2013) study that medical students who were more emotionally intelligent performed better in both the continuous assessments and the final examination. These results added to growing research showing the influence of EI on academic performance in an undergraduate medical program (Chew *et al*, 2013). As such, it is possible that emotional skill development may enhance academic performance. However, it is essential to note the weaknesses identified with the study included selection bias; non-participating students who were less motivated or discouraged with their already poor academic achievement; and the emotional intelligence measure was administered in English and not all respondents were native English speakers (Chew *et al*, 2013).

Joyce G. Walsh-Portillo conducted another study using multi-campus state college in Florida. The study sought to investigate if there was a positive relationship between higher academic performance and emotional intelligence in an Introduction to Business Course. Out of her study population, a sample size of 111 was selected (Walsh-Portillo J. G., 2011). Contrary to the study conducted by Chew *et al* (2013), Walsh-Portillo's study revealed a 'slight' positive correlation in the pre-intervention stage between emotional intelligence and traditional measures of academic success, specifically GPA.

Emotional intelligence has been raised high above the ladder over the years. Edward Darwin (2003) explains that emotional intelligence is essential for survival and needs to be given attention even in the workplace (Darwin, 2003). Prior to the articles above, McPheat (2010)

wrote an article on the significance of emotional intelligence in the workplace. Given that this is a long run benefit, it can be applied to the academic performance of students just as the effectiveness of workers. Similar to the study under investigation, McPheat used L'Oreal organization as the population, used a case study research design, and used the Emotional Competencies Inventory scale (McPheat, 2010). However, compared to the 125 students the study under investigation used as the sample size, a sample of 300 leading executives were used. The study revealed that leading executives who had the high levels of emotional intelligence also had high level of optimism. In this same year where the study was conducted, L'Oreal's annual revenue increased by $2.5million, and truly exceptional performers were strong in six particular competencies including team leadership, self-confidence, and organizational awareness (McPheat, 2010).

### *2.5 Socioeconomic Status and Academic Performance*

Inasmuch as the level of emotional intelligence influences one's level of academic performance, research has established that socioeconomic status may also influence one's level of academic achievement. One of these is the study conducted by Eric Jensen in 2009 on the effect of behaviour on the academic performance of college students (Jensen, 2009). According to Sroufe (2005), the attachments formed between parent and child beginning at birth predicts the quality of future relationships with teachers and peers and plays a leading role in the development of such social functions. This may include the curiosity, arousal, emotional regulation, independence and social competence.

Unlike this current study where only primary data on Ashesi University was used to test the level of performance of low-income and high-income students, Jensen used secondary data analysis and schools in different communities. At the end of the study, it was revealed that children in high-income communities had access to significantly more books than children in

low-income communities. Also, it showed that in some affluent communities, children had more books in their homes than low socioeconomic status children. However, generalization could not be made given the limited number of communities that were used for the study. Therefore, poverty does not only affect the academic performance of an individual but penetrates deeper into the body, brain, and soul than many of us realize (Jensen, 2009).

Correspondingly, Kim *et al* (2013) conducted a study to prove that as poverty penetrates deeper into the body, brain and soul of the individual, it affects the adults' emotional regulation. The study was guided by a theory by Julie Beck which stated that "lot of problems including physical illness, psychopathology, and inability to handle stress stems from the chronic stressors that children face in that challenging socioeconomic environment" (Kim *et al*, 2013). While Kim *et al* (2013) took a sample size of 49 participants and used their family income at age 9 to measure childhood and income of adult participants (24 years old) and their exposure to stressors including substandard housing, violence, and family conflict at age 9, 13, and 17, this paper uses a sample of 125 students consisting of those on financial aid, partial financial aid and no financial aid.

Kim *et al's* (2013) study also indicated that in contrast to childhood income, concurrent adult income was not associated with neural activity during emotion regulations. However, a weakness that was identified was that no main effect of reappraisal on diminishing amygdala activity was found. Therefore, the potential interpretation of the reappraisal-related amygdala modulation is limited to the context of variability in childhood family income at age 9 (Kim *et al*, 2013).

Furthermore, Salami (2011) conducted a study on how psychological and social factors contribute to the prediction of adjustment to college. Similar to the explanation provided by the Chapter 1 of this study, it appeared in a two-year long observation from Ashesi that first-

year students found it difficult in adjusting to the school within the first three months after enrolment because of the different environment each was exposed to before coming into the school. Hence, these students end up putting up new behaviours which allow them to fit into the society. According to Aggarwal (1998), an adjustment is a continual process by which a person varies his/her behaviour to produce a more harmonious relationship between himself/herself and his/her environment. Although Jensen's (2009) argument is on the environment and Salami's is on behaviour, there is a relationship between the two articles. That is, one's environment can influence the behaviour he/she portrays. Salami's study, Jensen's and this paper used university or college students as the population.

However, unlike this study and Jensen's that used first and final year students as the sample, Salami used only 250 first year students as the sample size. At the end of the study, it was revealed that all the independent variables predicted adjustments. These findings created a platform for counsellors, parents and college authorities to discuss ways of enhancing students' adjustment to college. It also implicated the need for university authorities to integrate activities designed to improve students' adjustment into college co-curricular activities meant for youth development (Salami, 2011). Currently, Ashesi is doing a similar thing and this study will indicate if it needs to be enhanced based on the findings from the analysis.

### *2.6 First-Generation Students and Academic Performance*

The author's own anecdotal experience as a fourth year student at Ashesi University has clearly drawn the line between first-generation student and the others. While students coming from a family with many professionals had a sense of direction about the courses to undertake which are relevant for their future careers, it appeared that the first generation students were naïve—more like lost. This may be because they have now been exposed to

such a world and hence, exploring the options available. Alexa E. Hodge confirmed this in 2010 by conducting a study on how families influence the experience of first-generation university students (Hodge, 2009). According to Dennis *et al* (2012), the increased level of stress for first-generation university students may be attributed to factors such as minority background, poor academic performance, and lack of knowledge of the university system. Hodge's study was such that only qualitative data was collected through three semi-structured focused group interviews with first-generation students, unlike this current study where a mixed research method will be used. It also had large sample size and population as compared to Hodge's study.

After the study, Hodge identified five categories related to family influence. These are support, understanding, motivation, goal achievement, and expectations. Jensen (2009), Kim *et al* (2013), and Salima (2011) will argue that lack or inadequacy of these factors is most likely to distort the smooth academic performance and college experience one is to have because of the poor emotional regulations. However, based on Goleman's argument, this model will be able to identify each of these factors in the individual that needs to be improved to make the college experience a better one.

### *2.7 Development of Emotional Intelligence in Universities*

Fortunately for students whose academic performance are shaky and workers whose jobs are at risk because of ineffectiveness and inefficiencies, emotional intelligence— the backbone of their success, can be developed and improved. Comparatively to the arguments most psychologists have expressed, some researchers argue that personality traits are influenced by genes and are extraordinarily persistent in adulthood. In spite of the role genetics play in these traits, gene expressions happen to be shaped by the life, social and emotional experiences of the individual (Robert & Emmerling, 2003). For a greater aspect of an

individual's level of emotional intelligence to be improved, he/she requires sustained effort and attention (Goleman, 1998). Apart from the vast evidence prominent psychologists have given regarding people's ability to improve their social and emotional competence, there have been new findings in the emerging field of affective neuroscience. These findings have begun to demonstrate that the brain circuitry of emotion exhibits a fair degree of plasticity even in adulthood.

This evidence of improving emotional intelligence cannot be seen in this study since it is a cross-sectional study. At the Weatherhead School of Management at Case Western Reserve University, students provided a persuasive evidence after conducting a longitudinal study to "assess their emotional intelligence competencies and cognitive competencies, select the specific competencies they would target for development, and develop and implement an individualized learning plan to strengthen those competencies" (Robert & Emmerling, 2003). The results can be seen in the figure below:

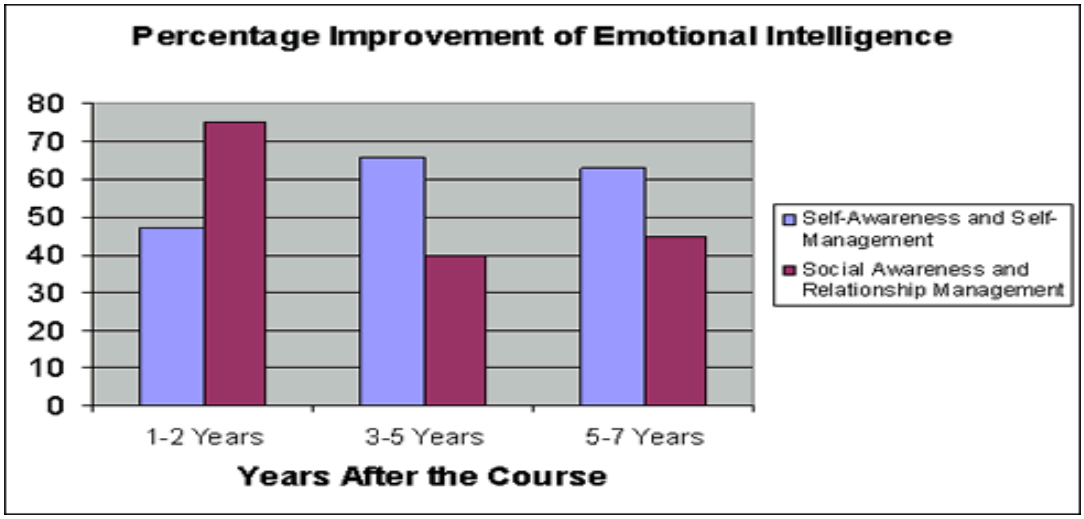


Fig 1.0 Side-by-side graph depicting percentage improvement of emotional intelligence (Goleman & Emmerling, 2003)

The results indicated that not only can emotional competencies be developed and improved, but these improvements are sustainable over time.

### *2.8 Assessment Instruments: EIS, ERTS, MSCEIT & ECI*

Many instruments have been developed to measure an individual's level of emotional intelligence. The first two instruments are the Emotional Inventory Scale (EIS) and the Emotional Reactions and Thoughts Scale (ERTS). Prior to recruitment of the study, 23 items were designed for the EIS and 25 items for ERTS to aid readability, clarity of the content, and easy administration. According to Polit and Beck (2004), a Cronbach's alpha coefficient (i.e. a measure of internal consistency and scale reliability) is sufficient if it has a value of 0.70, and the EIS and ERTS recorded 0.93 and 0.88 indicating a high level of reliability. However, none of them was relevant to the study under investigation. This is because although both instruments were carefully scrutinized for content validity and ambiguity and preventing duplication of questions, they were operationalized to increase their relevance in the mental health context, which may deviate the purpose for this study if applied.

Another model that was designed to support Mayer and Salovey's model of emotional intelligence is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). This model is also referred to as the *ability model* because it defines emotional intelligence as having the ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings; the ability to understand emotions; and the ability to regulate emotions. This instrument consists of 430 items. Considering the scope of the study under investigation, it will be quite unfavourable to rely on this instrument.

Research shows that the reliability and validity of scores the MSCEIT provides needs to be assessed thoroughly because (i) most studies have reported low-reliability coefficients for some of the branch scores; (ii) the reported reliability coefficient in previous studies have

been estimated with methods that do take into account the many sources of variance in the MSCEIT measurement design which may lead to biased or even inflated estimates; and (iii) several studies have provided mixed results regarding the external validity of the scores suggesting the need for studies on the issues relating to the instrument (Follesdal, 2008). Researchers have also expressed concerns about the absence of scientific standards for determining the accuracy of consensus and expert scores for the instrument. Also, it has been criticized because instead of requiring actual behaviours illustrative emotional intelligence, the items it constitutes require knowledge about emotional intelligence.

The final instrument to review is the Emotional Competence Inventory (ECI) which supports Goleman's model of emotional intelligence. The instrument was developed as a measure of emotional intelligence based on one's emotional intelligence and about 40% based on an earlier measure of competencies for managers, executives and leaders (self-assessment questionnaire) by Richard Boyatzis (Boyatzis, 1999). It provides self, manager, direct report, and peer rating on a series of behavioural indicators of emotional intelligence (Brown & Stys, 2004). This instrument consists of 50 items and five factors (self-motivation, self-awareness, social skills, empathy, and managing emotions) and categorized with a 5-likert scale where 1 = never like me, 2= occasionally like me, 3= sometimes like me, 4= frequently like me, and 5= always like me. It has been used in various studies.

- <u>Reliability & Validity of Emotional Competence Inventory</u>

Goleman's ECI was normed on about 6000 respondents in the North American and U.K. ECI databases. The total reliability coefficient of the five domains were 0.82, indicating a sufficient value for reliability. Unlike all the other instruments mentioned earlier, the ECI is very reliable, short, clear, and applicable in every institution and the workplace. Most

importantly, it supports Goleman's concept of emotional intelligence. Also, it can classify each respondent within the range of self and others' ratings, making it complete.

In terms of validity, measures of criterion validity indicated that there was a significant association between emotional intelligence of college principals and college student retention rate. Other studies have also proved that emotional intelligence as measured by ECI was significantly positively correlated with salary, job success, and life success (Brown & Stys, 2004).

From the review of various articles, it appeared that most studies were conducted to either establish a relationship between Emotional Intelligence and Academic Achievement, or Socioeconomic Status and Academic Achievement. However, it appears that few studies have been conducted on the relationship between socioeconomic status and emotional intelligence. In terms of the measurable instruments, the Emotional Competency Inventory turned out to be an accurate and reliable instrument among all the others and supported Goleman's model of emotional intelligence.

***Summary of Literature***

The above review shows that different researchers have varying views on socioeconomic status, emotional intelligence, and academic success. Therefore, this study seeks to establish a relationship between emotional intelligence and socioeconomic status, and then explain how this relationship can affect academic achievement. As such, the objectives drawn, the questions asked, and the various methods to analyse results from the data is indicated in the next chapter.

# CHAPTER 3: METHODOLOGY

## *3.1 Introduction*

The decisions made in this chapter were informed by results from the review of the literature by other researchers. This chapter explained the research design and the different approaches that were used in collecting data from respondents, the type of sampling method, how the data was analysed, as well as tools and techniques for the analysis.

## *3.2 Research Approach & Design*

For the purpose of this study, the case study mixed methods research design was chosen to provide a depth of understanding and corroboration to the study, while offsetting the weaknesses inherent to using each approach by itself. Most importantly, this design and approach is useful in examining contemporary real-life situations (Kohlbacher, 2006). However, the case study offered little basis for establishing reliability or to generalize the findings to a wider population since Ashesi University College is only one out of the many tertiary institutions in Ghana. Also, the case study may not be representative or typical of the larger problem being investigated.

## *3.3 Population, Sample & Sample Techniques*

The population for this study was Ashesi University College as stated earlier. Out of the population size of 781, a total sample size of 125 first and fourth Ashesi students were used *(refer appendix 2.0).* Also, a cluster sampling technique was used. Below is the procedure for using the cluster random sampling technique:

- Out of the population, the researcher chose a course that all first year Ashesi students take. Each section of the course is considered a cluster, one section was randomly selected, and all students in the section (cluster) were surveyed. Similarly, one fourth-year course taken by all Business Administration majors and one course taken all

Computer Science and Management Information Systems major was chosen, a section was randomly selected, and all students in the section completed the survey.

- Using the cluster sampling approach, a total of 65 first-year students and 60 fourth-year students were surveyed.

### *3.4 Qualitative Data Collection*

Two Deans of Students were interviewed to help explore administrators' views, experiences, and beliefs to support the responses given by students. The objective for conducting the interview was to gather information from the Dean of Students since they had access to some information of the respondents because of their constant interactions with them. This helped to improve the accuracy of responses from students and explore the quantitative findings. Some of the questions that were asked includes:

- How often do you communicate with students regarding their stay in the school?
- How do you view students with good socioeconomic status and those with poor socioeconomic status?
- Do students express any difficulties in adjusting into the school after a few months of enrolment?
- How many of these students have had their academic performance suffer because of the challenges they face in their first year?
- Do students quickly recover or adjust to the environment as the years go by?
- Does their academic performance improve over time?

In analysing this data, a content analysis was conducted. This was done using the responses from the interviews conducted on two Deans of Students to describe the research problem

and what it means. These individual interviews with the two Deans of Students of the school provided insight into data collected from the students.

### *3.5 Quantitative Data Collection*

The quantitative approach involved collecting data based on precise measurements using questionnaires and rating scales and behaviour responses. The questionnaires were administered to the 125 first and fourth year students, as well as the rating scales to test the level of emotional intelligence *(refer to appendix 3.0).*

These were analysed using analysis of variance, t-test, and chi-square test of independence:

- **Analysis of Variance (ANOVA):** this method of analysis is used to compare two or more groups. For the purpose of this study, a one-way and two-way ANOVA was specifically used for the analysis. ANOVA assumes that data are normally distributed; continuous, scaled or ratio data is used; variables are independent across groups; use of independent random sampling; and variances are homogeneous. These independent variables were expressed as 'full financial aid', 'partial financial aid', and 'no financial aid' against numerical scores for 'self-awareness', 'managing emotions', 'motivating oneself', 'empathy' and 'social skills'.

  Socio-economic status of students was measured by self-reported financial aid status. The proportion of the sample on full financial aid was 29%, the proportion receiving partial financial aid was 26%, and the proportion receiving no financial aid was 45%. A numerical score based on the Emotional Competence Inventory was calculated for each of the five dimensions including 'self-awareness', 'managing emotions', 'motivating oneself', 'empathy' and 'social skills'.

With a categorical explanatory variable and numerical variable, ANOVA was used to test the association between the two. Not only does the ANOVA help to establish whether or not there is relationship between emotional intelligence and socio-economic status, but establishes how sensitive each of these independent variables are to the dependent variables. The academic performance was measured using the Cumulative Grade Point Average (CGPA) of the respondents.

- **Chi-squared test of independence**: This method of analysis was used to analyse the third hypothesis that 'There is no association between academic success and socioeconomic status of Ashesi University students, given academic success as the response variable and socioeconomic status as the explanatory variable. It is used to analyse the relationship between two categorical variables. Thus, socioeconomic status (full financial aid, partial financial aid, no financial aid) and academic success as measured by GPA (2.00-2.50, 2.51-3.00, 3.01-3.50, 3.51-4.0). The null hypothesis is rejected if the p-value of the chi-squared test is smaller than the significant level.

- **T-test Analysis:** The t-test was used to analyse the fourth hypothesis statement which discusses the growth in emotional intelligence over the four years of study in Ashesi University College. As such, the mean emotional intelligence score of first and fourth year Ashesi University students in the sample were compared.

### *3.6 Other Research Instruments*

To measure the respondents' level of emotional intelligence, the Emotional Competence Inventory (ECI), an instrument developed by Daniel Goleman was employed. ECI is a 5-likert scale in the form of questionnaires consisting of 50 items to test the respondent's self-awareness, self-motivation, social skills, empathy and emotional management.

# CHAPTER 4: DATA ANALYSIS & FINDINGS

Chapter 1 and 3 sought to introduce a list of hypothesis statements that will be analysed. In this chapter, a content analysis was used to analyse the qualitative data while analysis of variance (ANOVA) and t-test analysis were used to analyse the various hypothesis supporting the quantitative data. Some analytical tools that helped in conducting the analysis were R-Studio, R-data, and Excel.

## *4.1 Analysis of Qualitative Data: Content Analysis*

- **Role of Deans**

The first interview was conducted on 10th February, 2017 with TK Azaglo. The interview lasted for 18 minutes 27 seconds. TK Azaglo is an Associate Dean of Students and community affairs who deals with students' well-being, engagements, and self-conduct. These engagements may be non-academic including housing, clubs and others; and services such as food, logistics and all other things relating to student interactions. The second interview was with Rev Steve Buchele on 20h February, 2017. This interview lasted for 20 minutes 25 seconds. Unlike TK, Rev Buchele is currently an adjunct faculty and teaches students only in their first year. He was an acting Director of the Office of Diversity and International Programs for a year.

- **Student-Dean Relationship**

Students have a range of conversations with these deans. While some may want to make clarifications or report any difficulties or misunderstandings with a particular course or faculty, others seek advice on post-graduate courses and choices as well as internships and job searches. Rev Buchele continuously interacts with five to six first year students who he mentors each year even after they graduate, and has conversations with the others through lectures. TK alternatively interacts with about 15 students for an hour every week, and about

25 students each for less than 30 minutes every week. Also, about 10 out of these students visits more than once in a semester.

- **Student Differences**

Both interviewees expressed the vast differences in students based on their socioeconomic status. These are some responses from the interactions with the Deans: *"Students on scholarship, especially the MasterCard Foundation scholars have low self-esteem and little or no self-confidence. This is because they perceive their admission into Ashesi University as a result of their poor background, leaving out how smart and intelligence they are* (Azaglo, 2017)*."* Similarly, Buchele (2017) stated that *"Students on scholarship have less or no confidence in themselves in their first year, ignoring the amazing abilities they have."*

Some reasons identified for these differences includes students' proficiency in English and the network created. Buchele (2017) added that *"In their first year, most students on scholarship may choose to neither speak in class nor attend office hours because they cannot speak English proficiently, which negatively impacts their level of confidence. Unlike these scholars, those without scholarships from schools like Wesley Girls' have a network in which they operate. They rarely feel alone or left out."* TK (2017) also stated that unfortunately, *"Most students judge their identity based on comparisons with others, forgetting that they are all unique in their own way."*

Regarding academic performance, interviewees mentioned that most students on scholarship do better than those without scholarships. *"These students work harder than those without financial aid because they are motivated by their background and perceive the scholarship as a ticket to their future success"* (Buchele, 2017). They identified other reasons for these differences to be influence from families in choosing courses for their children; poor time management; and differences in academic environment (i.e. the difference in the intensity of

work load and curriculum). *"Students without financial aid tend to be familiar with the school's curriculum because of their senior high schools than those on scholarship"* (Buchele, 2017)

- **Adjustment into School**

Given these differences, it appeared that most scholars especially find it difficult in adjusting in their first years. TK is currently mentoring 40 out of the 285 freshmen. 60% of these 40 have expressed difficulties in adjusting to the school's system. Although there are a few exceptions, these students pick up from the second semester onwards. To overcome these differences completely, *students can build relationships with friends who can hold them responsible for their actions, depend on others for help in times of difficulties, and balance academics with social life*. *"University is when you have the best"* (Azaglo, 2017). Therefore, students should realize that the classroom only gives one-third of their Ashesi experience and development, and participate in other co-curricular activities as well.

- **Role of School in Student Life**

Currently, the school has put measures in place aimed at intentionally bridging differences in students. These include courses such as Leadership and Foundation for Design and Entrepreneurship (FDE) which builds students' confidence level because of the numerous team projects and presentations as Buchele explained. The Deans of Students are currently having conversations with the Office of Diversity and International Programs (ODIP) on how to bridge the differences. However, according to TK Azaglo, Ashesi has failed to celebrate students on financial aid. In that, scholars are usually referred to based on their socioeconomic background in conversations and not their academic achievements.

Moving on, *"The school can train freshmen students as early as possible to learn how to create fun on their* own before *they adjust to the 'only academics matters' culture of current*

*students. It should also assist students in organizing campus events to enhance their social lifestyles. An atmosphere should be created where students across all year groups will be able to mingle with each other. Students should be given an opportunity to experience how other universities in Ghana and abroad, combine their academics with social life"* (Azaglo, 2017).

***Summary***

From the above responses and analysis of the interviews conducted, it appeared that the type of senior high school attended contributes to students' rate of adjusting in their first of university education as Oredein (2016) stated in his article. It also appeared that although students on full financial aid are intelligent and have a lot of abilities, they are usually challenged with low self-esteem and no or little self-confidence as compared to those without financial assistance. This supports Jenson's argument that the brains of children with poor socio-economic status have adapted to suboptimal conditions in ways that undermine good school performance. Therefore, they are likely to be involved in major risk factors including emotional and social challenges. However, both the school has major roles to play in bridging the gap between students.

### *4.2.0 Analysis of Quantitative Data*

This section covers the test conducted to analyse the questionnaires. These includes the analysis of variance, t-test, and chi-square test of independence.

### 4.2.1 ANOVA Test

The analysis of variance assumes that data is normally distributed. As such, regression analysis was used to test for normality, which indicated that all data were reasonably normally distributed. This can be seen in **Appendix 1**. It was used to analyse the hypothesis below which consists of one numerical and one categorical factors:

**Hypothesis 1**

$H_0$: There is no association between the emotional intelligence level of Ashesi University College students and their socio-economic status.

$H_1$: There is an association between the emotional intelligence level of students in Ashesi University College and their socioeconomic status.

<u>ANOVA Test for Self-Awareness vs. Socioeconomic Status</u>

From the results shown in the table below, the overall p-value for the categories was 0.415, a figure greater than the significance level of 0.05. As such, the null hypothesis that there is no association between self-awareness and socio-economic status of Ashesi students was not rejected.

Table 1.0
*Coefficients for self-awareness against socio-economic status*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 2 | 57 | 28.68 | 0.886 | 0.415 |
| Residual | 119 | 3852 | 32.37 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| Partial-Full | 1.9059459 | -5.401829 | 1.589937 | 0.4013656 |
| None-Full | 0.4600000 | -4.674369 | 1.754369 | 0.5295388 |
| None-Partial | 0.4459459 | -2.376602 | 3.268494 | 0.9254735 |

***Source:*** *Field Work*

The boxplot visually compared the categories of the socioeconomic status of the students to their level of self-awareness. It appears that there was no significant relationship between students on full and partial financial aid; students on no and full financial aid; and students on no and partial financial aid given the p-values of 0.40, 0.53 and 0.93 respectively. This has been graphically represented in the diagram below.

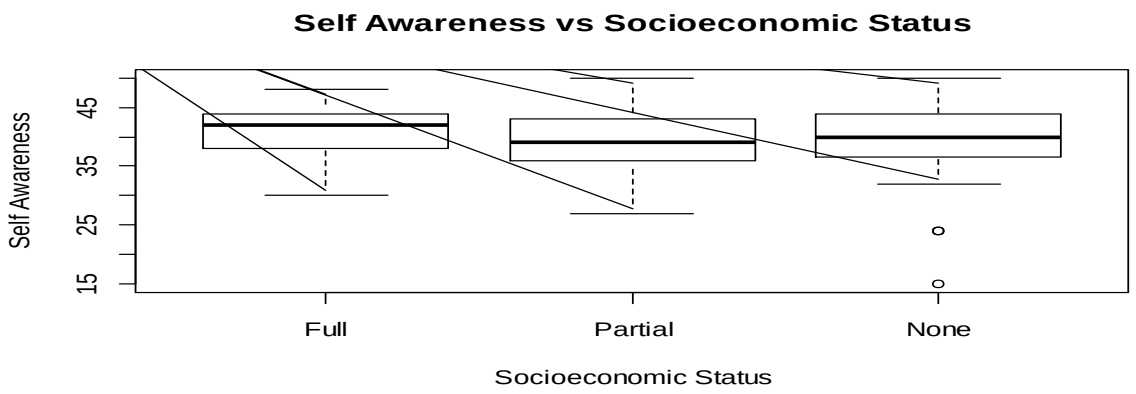


Fig 2.0 Boxplot depicting self-awareness against socio-economic status (field work)

It appears that although there is no association between self-awareness and socioeconomic status of students, the boxplot indicates the slight differences in the means of the various categories. While the distribution of students on partial and no financial aid seemed reasonably symmetrical, that of students on full financial aid is left skewed. Hence, students on full financial aid appear to be more self-aware than those without financial aid. Subsequently, those with partial financial aid were the least ranking group.

ANOVA Test for Managing Emotions vs. Socioeconomic Status

Just as shown in the previous analysis, it was revealed in Table 2 that there is no association between managing emotions and socioeconomic status of the students. That is, the p-value (0.929) is greater than the 0.05 significant level. Hence, the null hypothesis was not rejected. This reflected in the various categories when compared.

Table 2.0
*Coefficients for Managing Emotions vs. Socio-economic Status*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 2 | 7 | 3.54 | 0.074 | 0.929 |
| Residual | 119 | 5697 | 47.88 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| Partial-Full | 0.3935135 | -3.858066 | 4.645093 | 0.9737538 |
| None-Full | 0.6300000 | -3.279211 | 4.539211 | 0.9225816 |
| None-Partial | 0.2364865 | -3.196205 | 3.669177 | 0.9853708 |

***Source:*** *Field Work*

The boxplots below indicates that the distribution for students on full financial aid are skewed to the right whereas that of those on partial and no financial aid are reasonably symmetrical. The means of these categories are also sufficiently equal. It also appeared that students with different socioeconomic status have the same level of ability to manage themselves.

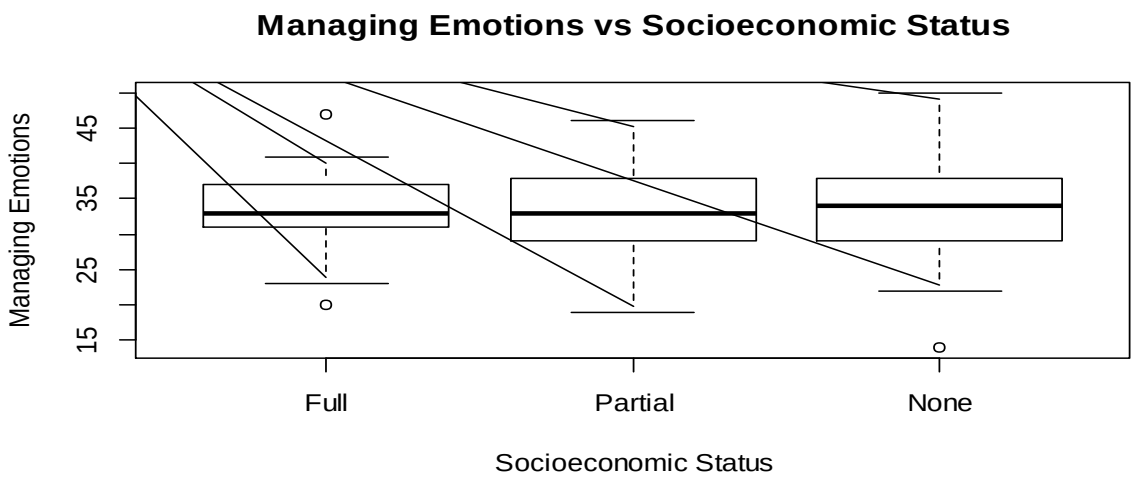


Fig 3.0 Boxplot depicting managing emotions against socio-economic status (field work)

ANOVA Test for motivating oneself vs. Socioeconomic Status

Unlike the first two associations analysed earlier, the p-value (0.005) for this association is less than the 0.05% significant level. Therefore, rejecting the null hypothesis that 'there is no association between motivating oneself and socioeconomic status of the students. However, this is only acceptable between partial-full financial aid students, and no-full financial aid students whose p-values are less than 0.05, with the exception of students on none-partial financial aid. This can be seen in the coefficients below:

Table 3.0
*Coefficients of motivating oneself against socio-economic status*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 2 | 469 | 234.26 | 5.505 | 0.00517** |
| Residual | 119 | 5064 | 42.56 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| Partial-Full | -4.7459459 | -8.754356 | -0.7375354 | 0.0158629 |
| None-Full | -4.9166667 | -8.602291 | -1.2310425 | 0.0055318 |
| None-Partial | -0.1707207 | -3.407079 | 3.0656376 | 0.9913962 |

***Source:*** *Field Work*

From the boxplot below, it appears students on full financial aid tend to have a higher ability to motivate themselves than those on partial and no financial aid.

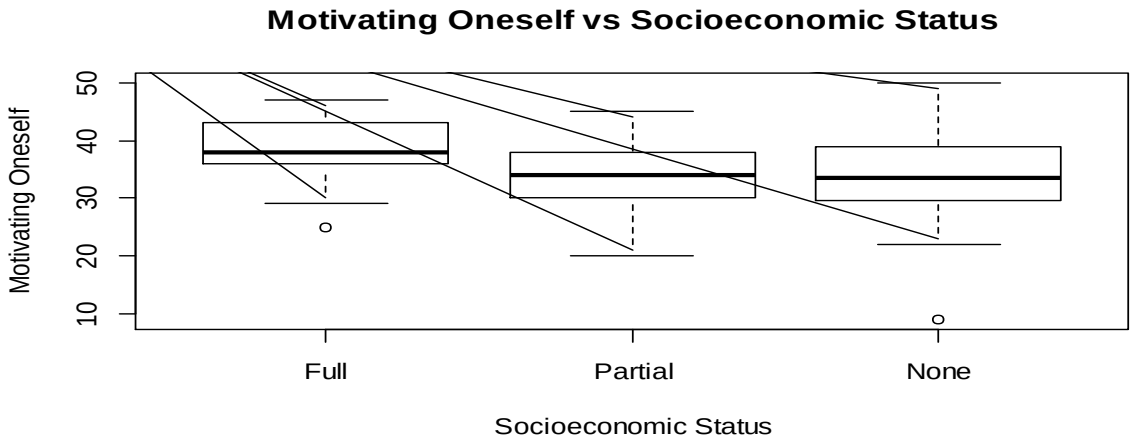


Fig 4.0 Boxplot depicting motivating oneself against socio-economic status (field work)

This observation corresponds with Buchele's argument that students on full financial aid (with socio-economic status) have a higher degree of self-motivation to work harder than those otherwise, given the perception that the scholarship is all they have to succeed academically. Given that there is a slight difference between students on no and partial financial aid, their distribution is reasonably symmetrical while that of those on full financial aid is right skewed.

ANOVA Test for Empathy vs. Socioeconomic Status

The p-values for these variables are greater than the significant level of 0.05. Hence, failing to reject the null hypothesis. That is, there is no association between students' empathy level and socioeconomic status.

Table 4.0

*Coefficients of empathy against socioeconomic status*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 2 | 146 | 73.07 | 2.223 | 0.113 |
| Residual | 119 | 3911 | 32.87 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| Partial-Full | -3.122162 | -6.644891 | 0.4005665 | 0.0934229 |
| None-Full | -1.710000 | -4.949053 | 1.5290529 | 0.4246178 |
| None-Partial | 1.412162 | -1.432060 | 4.2563848 | 0.4683614 |

***Source:*** *Field Work*

The boxplot above indicates that the mean distribution of the categories are reasonably symmetrical with the exception of that of students on full financial aid.

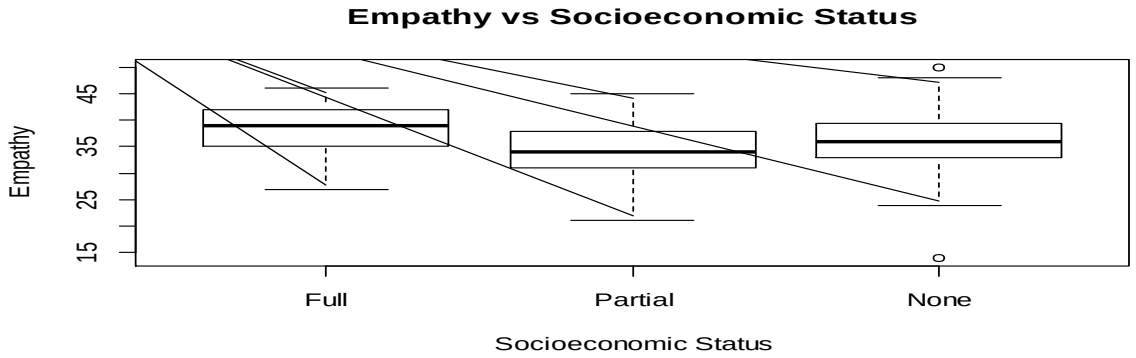


Fig. 5 Boxplot depicting empathy against socio-economic status (field work)

The distribution of these students is slightly left skewed. There is also some variability in the means of these components. However, students on full financial aid have the largest mean, making them more empathic than the others. Just as Keltner (2011) argued, the life experiences of the rich (good socioeconomic status) result in being less empathetic.

ANOVA Test for Social Skill vs. Socioeconomic Status

Given the p-value of 0.0534, the null hypothesis was not rejected since the p-value was larger than the 0.05 significant level.

Table 5.0

*Coefficients for social skills against socio-economic status*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 2 | 223 | 111.30 | 3.002 | 0.0534 |
| Residual | 119 | 4412 | 37.07 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| Partial-Full | -3.603243 | -7.3445036 | 0.1380171 | 0.0616883 |
| None-Full | -1.176667 | -4.6166535 | 2.2633202 | 0.6964511 |
| None-Partial | 2.426577 | -0.5940868 | 5.4472400 | 0.1412565 |

***Source:*** *Field Work*

The boxplot below indicates that there is a variation in the means of the variables. However, students on full financial aid tend to score higher on the social skills scale, followed by those receiving no financial aid, and then those on partial financial aid. The distribution of students on partial and no financial aid appears to be reasonably symmetrical while those on full financial aid was right skewed.

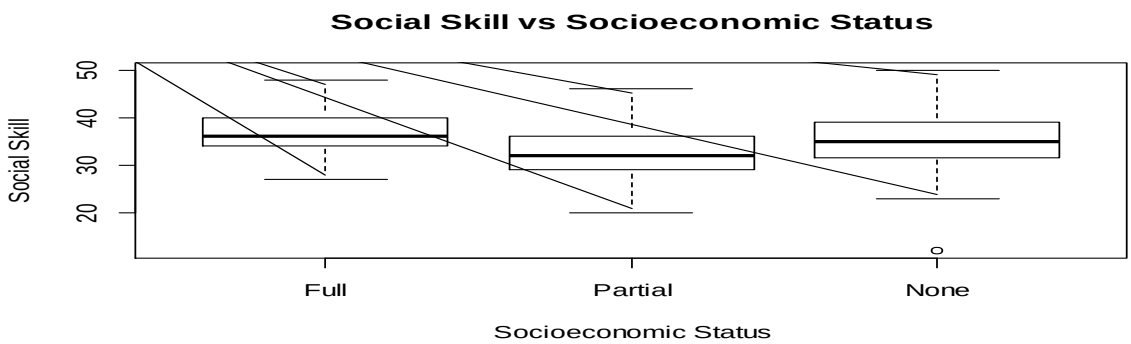


Fig 6.0 Boxplot depicting social skills against socio-economic status (field work)

This contradicts Rev Buchele's observation that most students on full financial aid in their first year fail to have networks in which they operate and build relationships. Probably, they recover speedily by the end of the first semester. Another reason why Rev Buchele's assessment may be incorrect is that it requires a certain level of emotional intelligence to seek out assistance from authority figures in institutions. Hence, he may not have heard the perspective of those with the lowest level of emotional intelligence.

From the analysis above, it appears that the association between socio-economic status and some components of emotional intelligence including self-awareness, managing emotions, social skills, and empathy is insignificant. However, motivating oneself indicated a significant association since its p-value was less than the 5% significant level. This indicates that, overall, there is no association. Therefore, failing to reject the null hypothesis there is no association between socio-economic status and these components of emotional intelligence of students in Ashesi University College. Although the analysis indicates that the association between emotional intelligence and socioeconomic status is insignificant, students on full financial aid appear to be more emotionally intelligent than those on partial and no financial aid *(refer to Table 1-5)*. This conclusion may prove Keltner right in her argument that "The life experiences of the rich result in being less empathetic, less altruistic, and generally more selfish, making it difficult for them to attain a higher level of emotional intelligence" (Alexander, 2011).

**Hypothesis 2**

$H_0$: There is no association between the academic success of students in Ashesi University College and their level of emotional intelligence.

$H_1$: There is an association between the academic success of students in Ashesi University College and their level of emotional intelligence.

a. This section is to test for the association between academic success and emotional intelligence **using the cumulative GPA at the end of level 100**.

ANOVA Test for Self-Awareness vs. Academic Success (Level 100)

In analysing the association between academic success and self-awareness, it appears that there is no association as stated in the null hypothesis. This is because p-value of 0.73 is greater than the 0.05 significant level.

Table 6.0
*Coefficients of self-awareness against academic success (level 100)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 45.4 | 15.14 | 0.434 | 0.73 |
| Residual | 51 | 1779.9 | 34.90 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | -3.11111111 | -12.539405 | 6.317182 | 0.8170400 |
| 3.01-3.5-2-2.5 | -3.19230769 | -11.618990 | 5.234375 | 0.7465648 |
| 3.51-4-2-2.5 | -3.75000000 | -12.520769 | 5.020769 | 0.6695274 |
| 3.01-3.5-2.51 | -3.0811966 | -6.149101 | 5.986708 | 0.9999837 |
| 3.51-4-2.51-3 | -0.63888889 | -7.176234 | 5.898456 | 0.9937957 |
| 3.51-4-3.01-3.5 | -0.55769231 | -5.542985 | 4.427600 | 0.9907709 |

***Source:*** *Field Work*

From the boxplot below, there were variations in the mean distribution of the categories. The distribution of each academic level of the students were left skewed, with the exception of students that had a GPA between 3.00-3.50 which was symmetrical. Surprisingly, there was an inverse relationship between the two data. Students with lower GPA score were more self-aware than those with higher GPA scores.

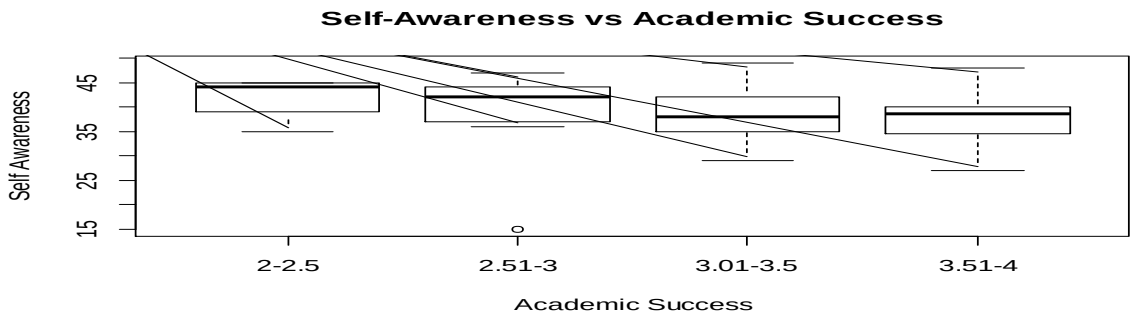


Fig 7.0 Boxplot depicting self-awareness against academic success (field work)

ANOVA Test for Managing Emotions vs. Academic Success (Level 100)

Similar to the test for an association between self-awareness and academic success, the null hypothesis was not rejected given that the p-value (0.548) is greater than the 0.05 significant level. Also, no association existed between any of the range of GPA scores and the students' ability to manage emotions. This is represented in the table below:

Table 7.0
*Coefficients for managing emotions against academic success (level 100)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 93.1 | 31.02 | 0.715 | 0.548 |
| Residual | 51 | 2212.6 | 43.39 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | -3.7777778 | -14.289842 | 6.734287 | 0.7756274 |
| 3.01-3.5-2-2.5 | -3.3846154 | -12.779935 | 6.010704 | 0.7743548 |
| 3.51-4-2-2.5 | -1.0625000 | -10.841458 | 8.716458 | 0.9915275 |
| 3.01-3.5-2.51 | 0.3931624 | -6.372241 | 7.158565 | 0.9986728 |
| 3.51-4-2.51-3 | 2.7152778 | -4.573527 | 10.004083 | 0.7561121 |
| 3.51-4-3.01-3.5 | 2.3221154 | -3.236230 | 7.880461 | 0.6853800 |

***Source:*** *Field Work*

In the boxplot below, it appeared that the mean distribution of students that scored GPA between 2.00-2.50 and 2.51-3.00 was right skewed, 3.01-3.50 was left skewed, and 3.51-4.00 was reasonably symmetrical. Also, it turned out that students scoring between 2.00-2.50 could manage themselves better, followed by those scoring between 3.51-4.00, then 2.51-3.00, and then between 3.01-3.50.

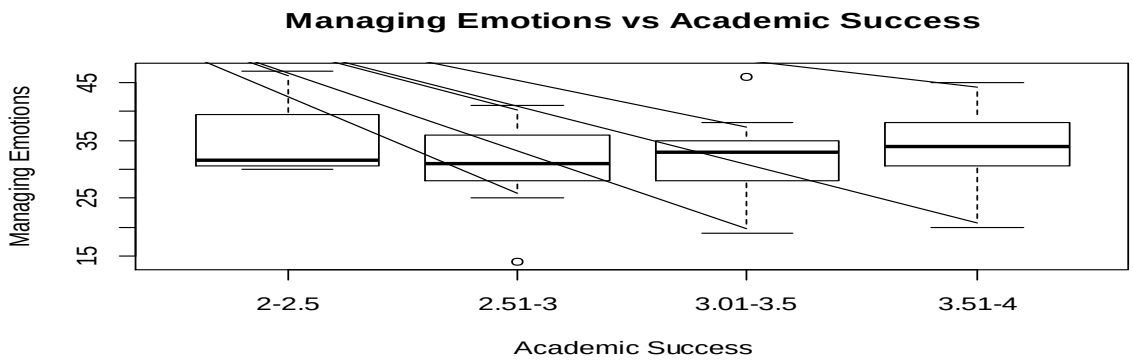


Fig 8.0 Boxplot depicting managing emotions against academic success (field work)

ANOVA Test for Motivating Oneself vs. Academic Success (Level 100)

Also, the p-value of 0.972 for the association between motivating oneself and academic success is greater than the significant level of 5%. Therefore, there is no association.

Table 8.0
*Coefficients for motivating oneself against academic success (level 100)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 13 | 4.34 | 0.077 | 0.972 |
| Residual | 51 | 2878 | 56.43 | | |

| | Diff | Lwr | Upr | P Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | -1.4166667 | -13.405071 | 10.571738 | 0.9891652 |
| 3.01-3.5-2-2.5 | -1.5576923 | -12.272513 | 9.157129 | 0.9802221 |
| 3.51-4-2-2.5 | -2.0000000 | -13.152339 | 9.152339 | 0.9639811 |
| 3.01-3.5-2.51 | -0.1410256 | -7.856579 | 7.574527 | 0.9999584 |
| 3.51-4-2.51-3 | -0.5833333 | -8.895796 | 7.729130 | 0.9976731 |
| 3.51-4-3.01-3.5 | -0.4423077 | -6.781281 | 5.896666 | 0.9977123 |

***Source:*** *Field Work*

It appears that there was a statistically significant variations between the mean distributions of the components. The distribution for all students that scored the GPA range but 2.00-2.50 was right skewed. The distribution of those between 2.00-2.50 was reasonably symmetrical. These students could also motivate themselves better than all the others. This is represented in the boxplots below:

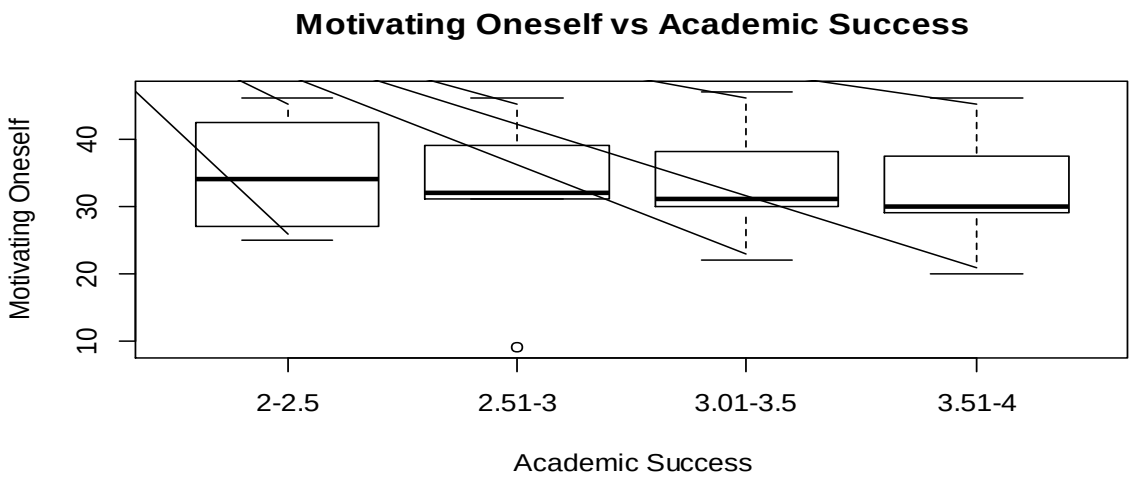


Fig 9.0 Boxplot depicting motivating oneself against academic success (field work)

ANOVA Test for Empathy vs. Academic Success (Level 100)

With a p-value of 0.129, it appears that the null hypothesis that there is no association between empathy and academic success of students cannot be rejected.

Table 9.0
*Coefficients for empathy against academic success (level 100)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 205.9 | 68.65 | 1.979 | 0.129 |
| Residual | 51 | 1769.3 | 37.32 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | -8.1111111 | -17.511094 | 1.288872 | 0.1134263 |
| 3.01-3.5-2-2.5 | -7.2307692 | -15.632149 | 1.170610 | 0.1148382 |
| 3.51-4-2-2.5 | -6.3750000 | -15.119433 | 2.369433 | 0.2260525 |
| 3.01-3.5-2.51 | 0.8803419 | -5.169343 | 6.930027 | 0.9801666 |
| 3.51-4-2.51-3 | 1.7361111 | -4.781605 | 8.253827 | 0.8936965 |
| 3.51-4-3.01-3.5 | 0.8557692 | -4.114554 | 5.826092 | 0.9679043 |

***Source:*** *Field Work*

It appears in the boxplots below that there were differences in the means of the categories. Students with GPA score between 2.00-2.50 turned out to be more empathetic, followed by those with 3.51-4.00, 2.51-3.00, and then 3.01-3.50. This is illustrated in the boxplots below:

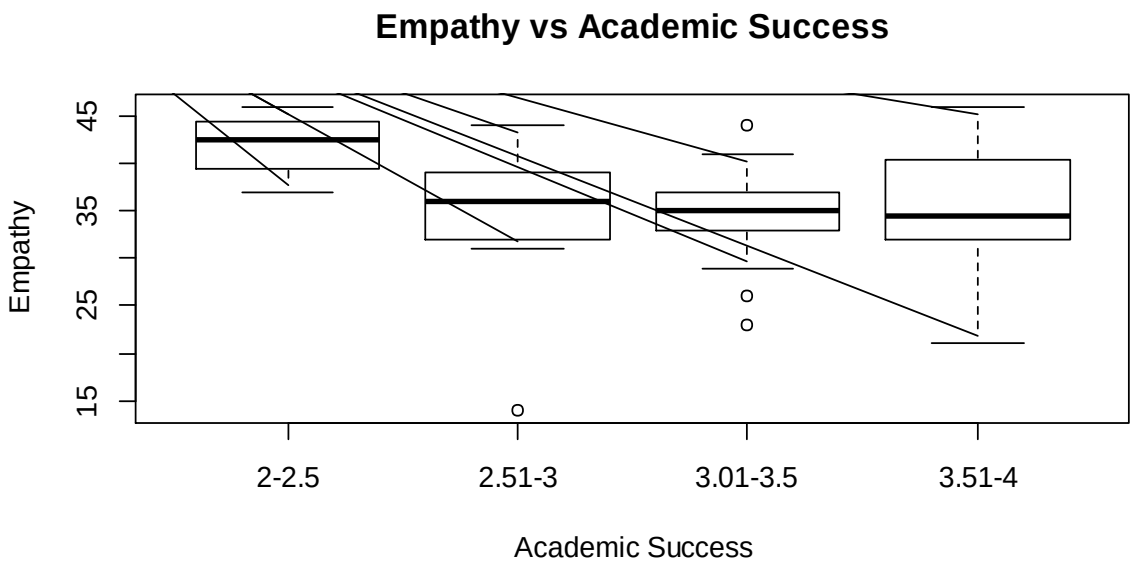


Fig 10 Boxplot depicting empathy against academic success (field work)

ANOVA Test for Social Skills vs. Academic Success (Level 100)

The p-value of 0.248 is greater than the 0.05 significant level. Hence, failing to reject the null hypothesis that there is no association between social skills and academic success of students.

Table 9.0
*Coefficients for social skills against academic success (100)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 159 | 53.01 | 1.42 | 0.248 |
| Residual | 51 | 1904 | 37.32 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | -6.80555 | -16.555668 | 2.944557 | 0.2607738 |
| 3.01-3.5-2-2.5 | -4.9423077 | -13.656620 | 3.772005 | 0.4413330 |
| 3.51-4-2-2.5 | -6.5000000 | -15.119433 | 2.570144 | 0.2395221 |
| 3.01-3.5-2.51 | -3.8632479 | -4.411775 | 8.138270 | 0.8592936 |
| 3.51-4-2.51-3 | 0.3055556 | -6.454931 | 7.066042 | 0.9993733 |
| 3.51-4-3.01-3.5 | -1.5576923 | -6.713149 | 3.597765 | 0.8529603 |

***Source:*** *Field Work*

The boxplots below indicates that students who scored between 2.00-2.50 had more social skills than the others. Also, the mean distribution for that score is reasonably symmetrical. However, between 2.51-3.00 and 3.51-4.00 are right skewed, and between 3.00-3.50 is sufficiently left skewed.

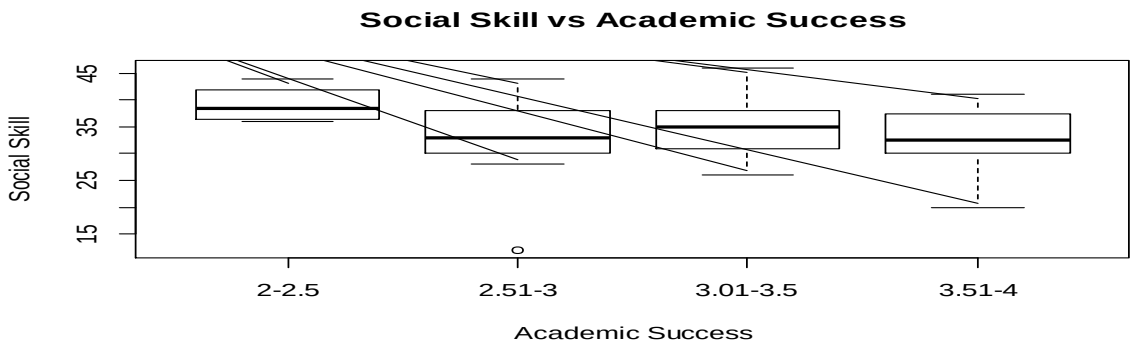


Fig 11 Boxplot depicting social skills against academic success (field work)

It appears in the above analysis that there is no association between the emotional intelligence and academic success of students in Ashesi University College. However, students with cumulative GPA between 2.00-2.50 are more emotionally intelligent than the others.

b. This section is to test for the association between academic success and emotional intelligence **using the cumulative GPA during level 400**.

ANOVA Test for Self-Awareness vs. Academic Success (Level 400)

In analysing the association between self-awareness and academic performance of students during their fourth year, it appeared that there is no association. This is because the p-value was greater than the 0.05 significant level.

Table 10
*Coefficient for self-awareness against academic success (400)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 99.6 | 33.22 | 0.982 | 0.409 |
| Residual | 51 | 1725.7 | 33.84 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | 6.2500000 | -5.963319 | 18.463319 | 0.5304051 |
| 3.01-3.5-2-2.5 | 3.2931034 | -8.001228 | 14.587435 | 0.8656671 |
| 3.51-4-2-2.5 | 2.5625000 | -9.024072 | 14.149072 | 0.9354517 |
| 3.01-3.5-2.51 | -2.9568966 | -9.126405 | 3.212612 | 0.5841443 |
| 3.51-4-2.51-3 | -3.6875000 | -10.377010 | 3.002010 | 0.4663944 |
| 3.51-4-3.01-3.5 | -0.7306034 | -5.541665 | 4.080459 | 0.9775763 |

From the boxplots below, it can be seen that students with a CGPA of 3.51-4.00 had a symmetrical distribution, and students with CGPA between 3.01-3.50 and 2.00-2.50 had a right skewed distribution.

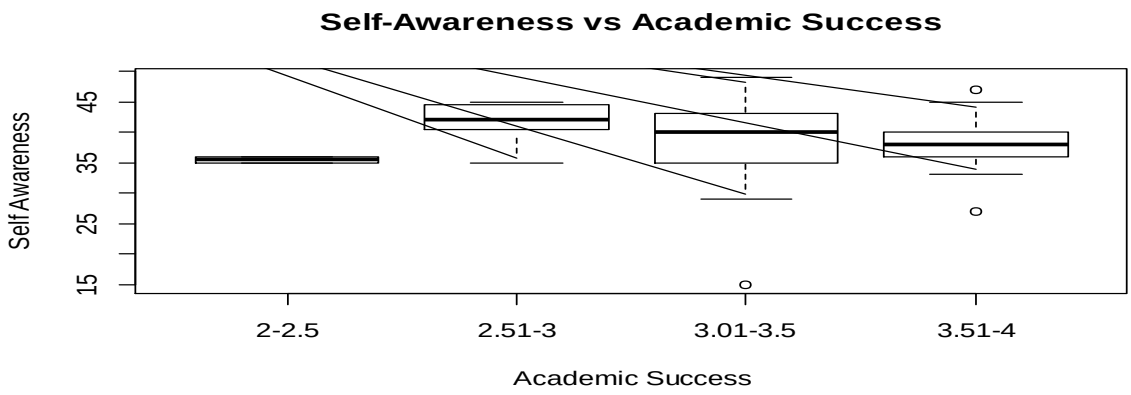


Fig 12 Boxplot depicting self-awareness against academic success (field work)

Also, students with 2.51-3.00 had a distribution that is sufficiently left skewed. However, students within the CGPA of 2.51-3.00 tend to be more self-aware than the others.

ANOVA Test for Managing Emotions vs. Academic Success (Level 400)

Again, the null hypothesis was not rejected. This is because the p-value (0.337) is greater than the 0.05 significant level. Also, none of the levels of CGPA had any significant relationship between them.

Table 11
*Coefficient for managing emotions against academic success (400)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 146.3 | 48.78 | 1.152 | 0.337 |
| Residual | 51 | 2159.4 | 42.34 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | 1.875000 | -11.787068 | 15.537068 | 0.9832544 |
| 3.01-3.5-2-2.5 | -2.793103 | -15.427173 | 9.840967 | 0.9355189 |
| 3.51-4-2-2.5 | -1.125000 | -14.085976 | 11.835976 | 0.9956288 |
| 3.01-3.5-2.51 | -4.668103 | -11.56944 | 2.233235 | 0.2868833 |
| 3.51-4-2.51-3 | -3.000000 | -10.483023 | 4.483023 | 0.7122990 |
| 3.51-4-3.01-3.5 | 1.668103 | -3.713649 | 7.049856 | 0.8432311 |

The boxplots below shows that the distributions for all the different levels of CGPA are sufficiently symmetrical, with the exception of students who scored 2.51-3.00. They have a right skewed distribution, and have the ability to manage themselves better.

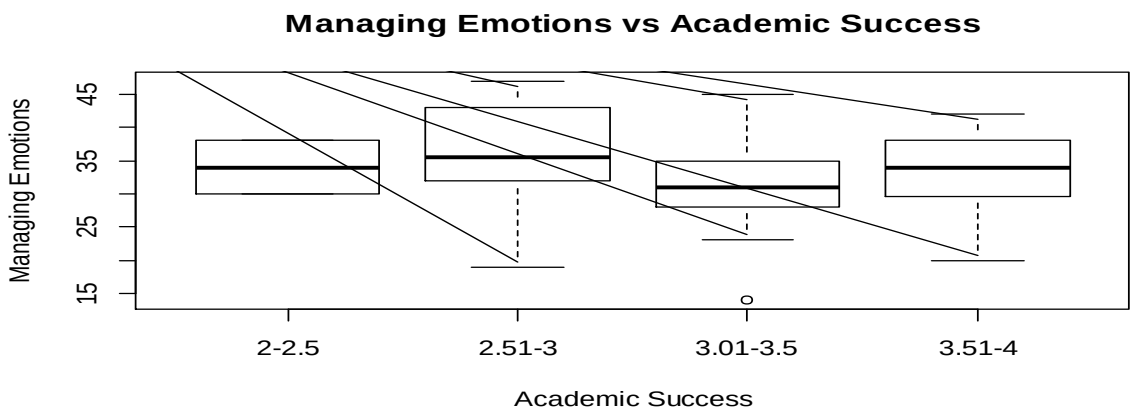


Fig 13 Boxplot depicting managing emotions against academic success (field work)

ANOVA Test for motivating oneself vs. Academic Success (Level 400)

From the information given above, it appears the null hypothesis was not rejected since the p-values of the various levels of CGPA was greater than the 5% significance level. Hence, there is no association between motivating oneself and academic performance of students.

Table 12
*Coefficients for motivating oneself against academic success (400)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 315.3 | 105.1 | 2.081 | 0.812 |
| Residual | 51 | 2575.5 | 50.5 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | 28.045601 | 0.1032126 | 13.1250000 | -1.795601 |
| 3.01-3.5-2-2.5 | 23.849629 | 0.2266268 | 10.051724 | -3.746181 |
| 3.51-4-2-2.5 | 26.154925 | 0.1233207 | 12.000000 | -2.154925 |
| 3.01-3.5-2.51 | -3 4.463805 | 0.7014375 | -3.073276 | -10.610357 |
| 3.51-4-2.51-3 | 7.047350 | 0.9831063 | -1.125000 | -9.297350 |
| 3.51-4-3.01-3.5 | 7.825788 | 0.8150036 | 1.948276 | -3.929237 |

***Source:*** *Field Work*

The boxplot describes the variations in the means of the categories. It appeared that the distribution of students who scored within 3.01-2.50 and 3.51-4.00 was skewed to the right while those who scored within 2.00-2.50 was reasonably symmetrical. However, students wh o scored within 2.51-3.00 had a left skewed distribution, and were able to motivate themselve s better than the others.

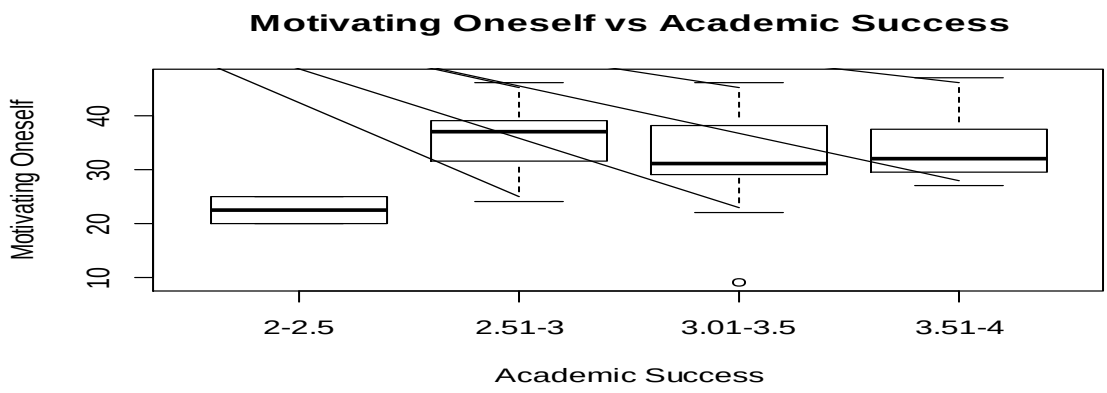


Fig 14 Boxplot depicting motivating oneself against academic success (field work)

ANOVA Test for Empathy vs. Academic Success (Level 400)

The null hypothesis was not rejected since the value (0.754) is greater than the significance level of 0.05.

Table 13
*Coefficients for empathy against academic success (400)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 45.3 | 15.10 | 0.399 | 0.754 |
| Residual | 51 | 1929.9 | 37.84 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | 3.000000 | -9.915682 | 15.915682 | 0.9262323 |
| 3.01-3.5-2-2.5 | 0.362069 | -11.581777 | 12.305915 | 0.9998103 |
| 3.51-4-2-2.5 | 0.937500 | -11.315392 | 13.190392 | 0.9969919 |
| 3.01-3.5-2.51 | -2.637931 | -9.162235 | 3.886373 | 0.7068918 |
| 3.51-4-2.51-3 | -2.062500 | -9.136710 | 5.011710 | 0.8656898 |
| 3.51-4-3.01-3.5 | 0.575431 | -4.512305 | 5.663167 | 0.9904694 |

***Source:*** *Field Work*

Also, students who scored within 2.51-3.00 tends to be more empathic as shown in the boxplots below:

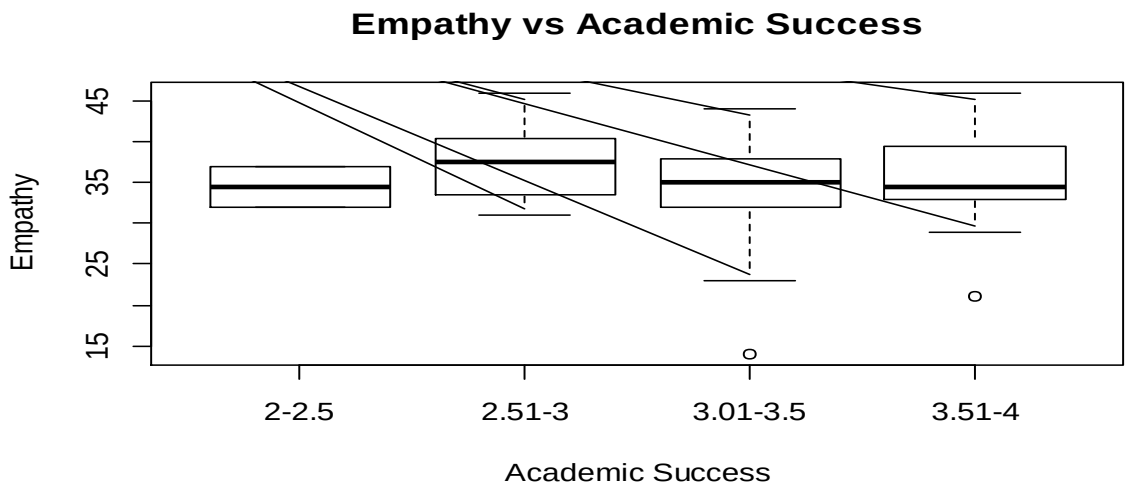


Fig 15 Boxplot depicting empathy against academic success (field work)

ANOVA Test for Social Skill vs. Academic Success (Level 400)

Given a p-value of 0.238 and a significant level of 0.05, the null hypothesis that there is no association between social skills and academic success cannot be rejected since the p-value is greater than the significant level.

Table 14
*Coefficients for social skills against academic success (400)*

| | DF | Sum Sq. | Mean Sq. | F-Value | P-Value |
|---|---|---|---|---|---|
| FINAID | 3 | 162.5 | 54.16 | 1.454 | 0.238 |
| Residual | 51 | 1900.1 | 37.26 | | |

| | Difference | Lower | Upper | P-Value Adj |
|---|---|---|---|---|
| 2.51-3-2-2.5 | 2.875000 | -9.940469 | 15.690469 | 0.9328868 |
| 3.01-3.5-2-2.5 | -1.517244 | -13.368414 | 10.333932 | 0.9863144 |
| 3.51-4-2-2.5 | -2.4375000 | -14.595321 | 9.720321 | 0.9507635 |
| 3.01-3.5-2.51 | -4.3922414 | -10.865923 | 2.081441 | 0.2843104 |
| 3.51-4-2.51-3 | -5.3125000 | -12.331821 | 1.706821 | 0.1977804 |
| 3.51-4-3.01-3.5 | -0.9202586 | -5.968519 | 4.128002 | 0.9622800 |

***Source:*** *Field Work*

From the boxplots below, it appears that students with CGPA of 2.51-3.00 tend to have more social skills, followed by students with CGPA of 3.51-4.00.

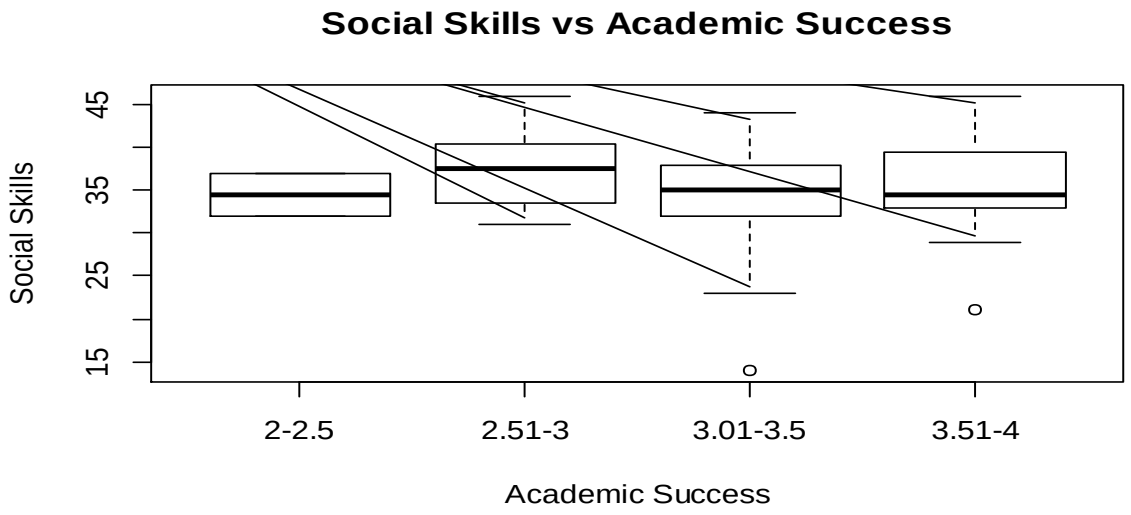


Fig 16 Boxplot depicting social skills against academic success (field work)

It was indicated after the analysis that regardless of the level is student in (level 100 or 400), the null hypothesis that there is no association between the emotional intelligence and academic success of Ashesi University students cannot be rejected. However, it turned out that students with CGPA within 2.51-300 were more emotionally intelligent than the others.

### 4.2.2 Chi-Squared Test of Independence

The chi-squared test of independence was used to analyse two categorical variables. Therefore, it was used to test the hypothesis below consisting of socio-economic status and academic success.

**Hypothesis 3**

$H_0$: There is no association between the academic success of students in Ashesi University College and their level of socioeconomic status.

$H_1$: There is an association between the academic success of students in Ashesi University College and their level of socioeconomic status.

Chi-squared Test for Level 400 Cumulative GPA

Given the p-value of 0.7537 which is greater than the 0.05 significant level, the null hypothesis cannot be rejected. Thus, there is no association between the socio-economic status of students and their level of academic performance.

Table 15
*Tabular representation of chi-square test for level 400 CGPA against socioeconomic status*

| | 2 - 2.5 | 2.51 - 3 | 3.01 – 3.5 | 3.51 – 4 |
|---|---|---|---|---|
| Full | 0 | 2 | 5 | 2 |
| Partial | 1 | 2 | 10 | 9 |
| None | 1 | 4 | 14 | 5 |

X-squared = 3.4269, df = 6, p-value = 0.7537

***Source:*** *Field Work*

Chi-squared Test for Level 100 Cumulative GPA

The p-value of 0.0175 is less than the 0.05 significance level. As such, the null hypothesis that there is no association between students' socio-economic status and academic performance is rejected.

Table 16
*Tabular representation of chi-squared test for level 100 CGPA against socioeconomic status*

| | 2 - 2.5 | 2.51 - 3 | 3.01 – 3.5 | 3.51 - 4 |
|---|---|---|---|---|
| Full | 3 | 2 | 3 | 1 |
| Partial | 0 | 3 | 9 | 10 |
| None | 1 | 4 | 14 | 5 |

X-squared = 15.38, degree of freedom = 6, p-value = 0.0175

***Source:*** *Field Work*

This means that in the first year of the students' education, most students may be affected by their level of socioeconomic status. However, it is different for the students in their final year.

### 4.2.3 T-Test

With the t-test, the mean emotional intelligence scores of first and fourth year students were compared. This was to determine whether there a possible change in the level of emotional intelligence over the years. It was therefore used to test the hypothesis below:

**Hypothesis 4**

$H_0$: The level of emotional intelligence of an Ashesi University College student remains unchanged after 4 years of schooling.

$H_1$: The level of emotional intelligence of an Ashesi University College student changes after 4 years of schooling.

T-Test for Year Groups vs. Self-Awareness Level

Given the p-value of 0.1583 which is greater than the 0.05 significant level, the null hypothesis cannot be rejected. Thus, the self-awareness level of students remains the same after their four years in Ashesi.

t = 1.4195, degree of freedom = 122.23, p-value = 0.1583

**Sample estimates**:

| Mean in group 100 | Mean in group 400 |
|---|---|
| 40.32308 | 38.90000 |

T-Test for Year Groups vs. Managing Emotions

The null hypothesis that students' ability to manage emotions remains unchanged over the years cannot be rejected since the p-value of 0.2086 is greater than the 0.05 significant level. Therefore, the ability of a student to manage emotions in Level 100 does not change when the students gets to Level 400. This is represented in the results below:

t = 1.2641, degree of freedom = 122.99, p-value = 0.2086

**Sample estimates:**

| Mean in group 100 | Mean in group 400 |
|---|---|
| 34.27692 | 32.75000 |

T-Test for Year Groups vs. motivating oneself

Unlike the first two variables analysed, it appears that the p-values of 0.03957 was less than the 0.05 significant level. Hence, rejecting the null hypothesis. This implies that, students' ability to motivate themselves declines over their four years of stay in Ashesi.

t = 2.0817, degree of freedom = 115.96, p-value = 0.03957

**Sample estimates**:

| Mean in group 100 | Mean in group 400 |
|---|---|
| 36.06154 | 33.56667 |

T-Test for Year Groups vs. Empathy

With being empathic, it appeared that the level of empathy students have in their first year does not change over time. This is because the p-value of 0.3219 is greater than the 0.05 significant level.

t = 0.99465, degree of freedom = 119.91, p-value = 0.3219

**Sample estimates**:

| Mean in group 100 | Mean in group 400 |
|---|---|
| 36.66154 | 35.63333 |

T-Test for Year Groups vs. Social Skills

Just as the previous analysis, it appeared that the students' level of social skills in level 100 does not change over their 4-year stay in Ashesi. This is because from information below, the p-value of 0.3879 was greater than the 0.05 significant level.

t = 0.86657, degree of freedom = 122.2, p-value = 0.3879

**Sample estimates:**

| Mean in group 100 | Mean in group 400 |
|---|---|
| 35.18462 | 34.23333 |

From the above analysis, it appears that all the components of emotional intelligence remains unchanged throughout their stay in Ashesi, except students' ability to motivate themselves.

### *4.3 Summary of Results*

The table below summarises the results from the quantitative analysis:

| Test | Method of Analysis | Result | Decision |
|---|---|---|---|
| Association between emotional intelligence (i.e. self-awareness, managing emotions, motivating oneself, empathy, and social skills) and socioeconomic status of Ashesi students | Analysis of variance | P-value >5% | Do not reject the null hypothesis that there is no association between emotional intelligence (social skills, empathy, self-awareness, managing emotions) and socioeconomic status, except the association between motivating oneself & socioeconomic status |
| Association between academic success and emotional intelligence (i.e. self-awareness, managing emotions, motivating oneself, empathy, and social skills) of Ashesi students at the end of Level 100 | Analysis of Variance | P-value >5% | Do not reject the null hypothesis that there is no association between academic success and emotional intelligence (social skills, empathy, self-awareness, managing emotions, motivating oneself) of Ashesi students at the end of Level 100 |
| Association between academic success and emotional intelligence (i.e. self-awareness, managing emotions, motivating oneself, empathy, and social skills) of Ashesi students at the end of Level 400 | Analysis of Variance | P-value >5% | Do not reject the null hypothesis that there is no association between academic success and emotional intelligence (social skills, empathy, self-awareness, managing emotions, motivating oneself) of Ashesi students at the end of Level 400 |
| Association between academic success and socioeconomic status of Ashesi students at the end of Level 100 | Chi-squared test | P-value <5% | Reject the null hypothesis that there is no association between academic success and socioeconomic status of Ashesi students for Level 100 |
| Association between academic success and socioeconomic status of Ashesi students at the end of Level 400 | Chi-squared test | P-value >5% | Do not reject the null hypothesis that there is no association between academic success and socioeconomic status of Ashesi students for at the end of Level 400 |
| Development of emotional intelligence (self-awareness, empathy, managing emotions, motivating oneself, social skills) over the four years | T-test | P-value >5% | Level of emotional intelligence (self-awareness, managing emotions, empathy, social skills) does not change over the four years stay in Ashesi, except students' ability to motivate themselves |

### *4.4 Findings from Analysis*

Per the above observations, interviews with the Deans of Students, and discussions, it appears that inasmuch as Ashesi is creating an atmosphere where differences amongst students will be reconciled, the reasons for these differences persist.

First, students tend to compare themselves with other students. Hence, negatively impacting their self-esteem and level of confidence. While proficiency in English language largely affects the ability of most students with poor socioeconomic status to build relationship with both students and lecturers, they readily get over it. This is because of their self-motivation which is driven by their scholarship and background. It therefore appeared that although no significant association or relationship was established between socioeconomic status and emotional intelligence level of students, students on full financial aid were more emotionally intelligent than students with no or partial financial aid.

Also, there was no significant association between the emotional intelligence and academic performance of 4$^{th}$ year students while they were in level 100 and 400. However, unlike the students within 2-2.50 CGPA bracket who appeared to be more emotionally intelligence while in level 100, students within the 2.51-3.00 bracket turned out to be more emotionally intelligent in level 400. Using the chi-squared test of independence, it was revealed that although there was no significant association between socioeconomic status and academic performance of students in their first year, there was a significant association in their fourth year. This implies that students are probably able to recover from emotional intelligence and socioeconomic status related issues after the first year of study. Finally, it indicated students' level of emotional intelligence including self-awareness, managing emotions, empathy and social skills does not change over their four years in school. However, their ability to motivate themselves changes at a declining rate over the four years in Ashesi.

# CHAPTER 5: LIMITATIONS, CONCUSION & RECOMMENDATIONS

In the previous chapter, a content analysis, analysis of variance, chi-squared test of independence, and t-test was conducted to analyse the responses from interviews and questionnaires administered given different hypothesis statement. The results showed that there is no association between emotional intelligence and socio-economic status of students; there is no association between academic success and emotional intelligence; there is no association between academic success and socio-economic statement; and the emotional intelligence of students remains unchanged over the four years in school.

## *5.1 Limitations*

However, there are a few limitations to this study. First, the conclusions drawn cannot be generalised since the study is a case study on Ashesi University College. Also, many of the questions asked in the questionnaire were sensitive, and perhaps difficult for respondents to answer. There was also limited literature to support the methodological approach.

## *5.2 Conclusion*

From the analysis, it can be concluded that the emotional intelligence level of student of Ashesi University College is not dependent on their level of socioeconomic status. However, students on full financial aid tend to be more emotionally intelligent than those on partial and no financial aid. Also, there is no association between socioeconomic status and emotional intelligence level of these students and their level of academic performance. However, while students within the CGPA bracket of 2.00-2.50 tend to be more emotionally intelligent in their first year, those within the CGPA bracket of 2.51-3.00 tend to be more emotionally intelligent in their fourth year.

Interestingly, it appeared that while the academic performance of students is not dependent on their socioeconomic status in their first year, the opposite was true. Also, the overall

emotional intelligence of students does not improve over their four years stay in the school. However, the ability of students to motivate themselves changes but declines over time. This is probably because of the emphasis placed handling pressures during sessions held and courses taken in the first year. From the interview with Rev Buchele, he stated that "One of the objectives for offering courses such as Giving Voice to Value and Leadership in first year is to help students attain confidence and motivate themselves through teamwork". This perhaps explains why only students' ability to motivate themselves changes over the four years stay.

Goleman in his theory argues that having a higher level of emotional intelligence gives one the potential skills and platform necessary to attain higher level of performance. However, this did not appear to be the case for Ashesi University students. It was drawn from the analysis that students with averagely lower academic performance were more self-aware and empathetic, had more social skills, and could manage their emotions and motivate themselves better than those with higher academic performance. This implies that perhaps higher academic performance may be influenced by other factors other than emotional intelligence, or Goleman's theory of emotional intelligence cannot be universally applied. Also, further studies can be conducted on this topic to determine possible variations in the results.

### *5.3 Recommendations*

It appeared in the analysis that academic performance of students is not dependent on their socioeconomic status in the first year but the opposite is true in their fourth year. This may be because the things learnt and discussed in level 100 fades away. It is therefore recommended that the school continuously remind students of these lessons and advise them by extending the programs it organises for students in their first year across the other levels. This is to ensure that all differences are permanently bridged.

Inasmuch as some elements in courses such as ‘Giving Voice to Value’ and ‘Leadership’ offered in first year at Ashesi is aimed at building students’ confidence through teamwork and presentations, lecturers should establish personal relationships with students who do not seem to g*et al*ong, especially those on full scholarship. Also, current mentorship programs should be continued and expanded. This will help students to familiarise themselves earlier with the new system they have been introduced to, contribute to class discussions, and voice out their opinions in any environment when necessary.

Additionally, given that only students’ ability to motivate themselves improve over their four years stay in the school, programs organized to build students capacity during orientations, career sessions and exit strategies should capture and emphasize on improving the other aspects of emotional intelligence such as the level of self-awareness, social skills, empathy, and managing emotions.

Finally, it was drawn from the analysis that students with lower academic performance were on more emotionally intelligent than those with higher academic performance. Hence, a strategy should be adopted by both students and the school to create a fine balance between the two. Otherwise, more emphasis should be placed on other factors that may contribute to higher academic performance.

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# APPENDICES

***Appendix 1.0***

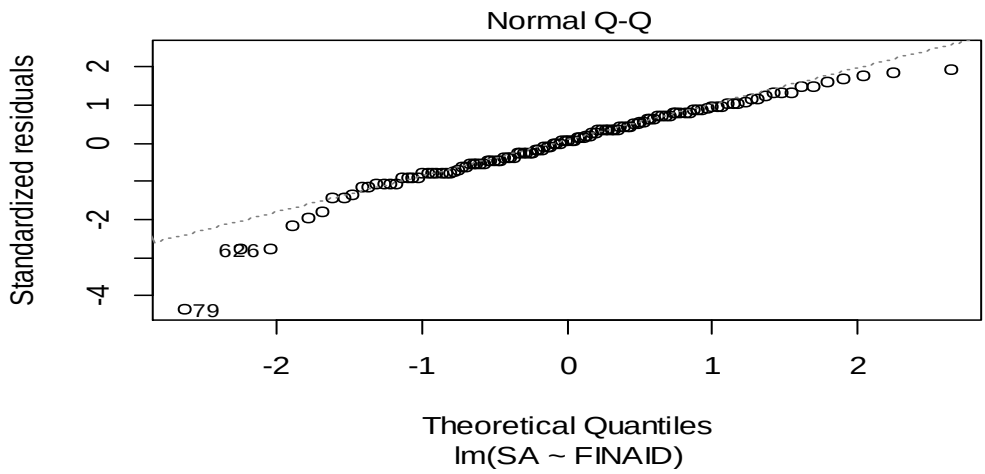
**Test for Normality:** A regression analysis was used to test for normality.

**Self-Awareness vs. Socioeconomic Status**

Coefficients:

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 40.960 | 1.138 | 35.997 | <2e-16 *** |
| FINAIDPartial | -1.906 | 1.473 | -1.294 | 0.198 |
| FINAIDNone | -1.460 | 1.354 | -1.078 | 0.283 |

Signif. Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1




The diagram above also shows that the responses to the variables are sufficiently normally distributed.

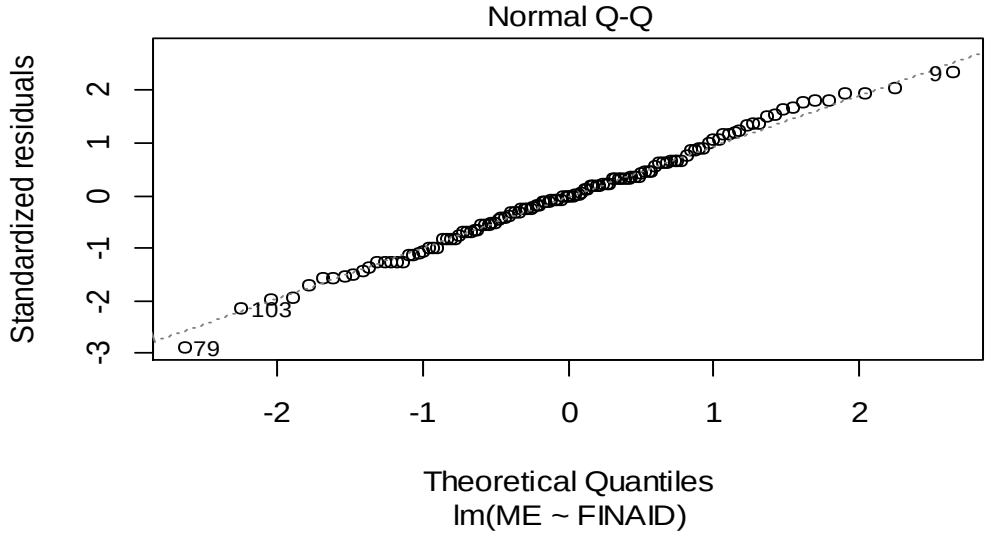
**Managing Emotions vs.. Socioeconomic Status**

Coefficients:

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 33.1200 | 1.3838 | 23.933 | <2e-16 *** |
| FINAIDPartial | 0.3935 | 1.7913 | 0.220 | 0.827 |
| FINAIDNone | 0.6300 | 1.6471 | 0.382 | 0.703 |

Signif. Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

The responses were sufficiently normally distributed. This can be seen in the diagram below:



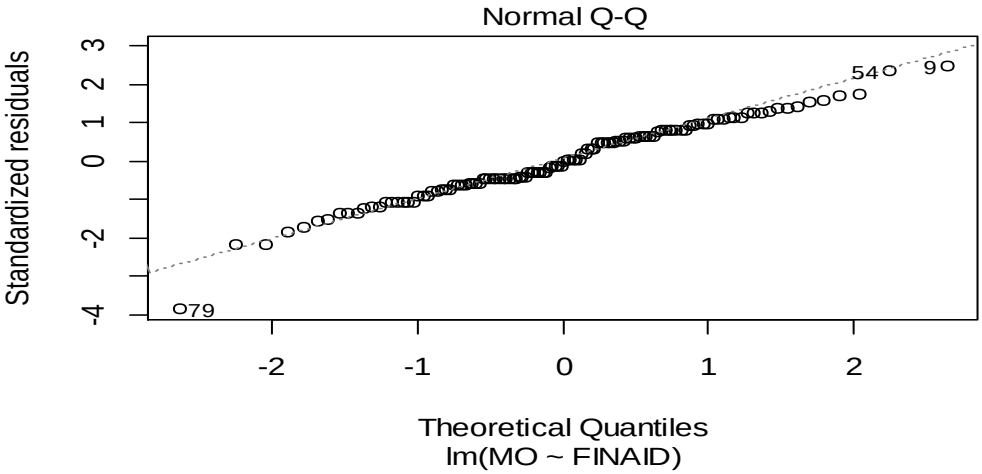

**Motivating Oneself vs.. Socioeconomic Status**

Coefficients:

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 38.800 | 1.305 | 29.739 | < 2e-16 *** |
| FINAIDPartial | -4.746 | 1.689 | -2.810 | 0.00579 ** |
| FINAIDNone | -4.917 | 1.553 | -3.166 | 0.00196 ** |

Signif. Codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

In the diagram below, it appeared that although the null hypothesis was rejected, responses for these variables were also sufficiently normally distributed.



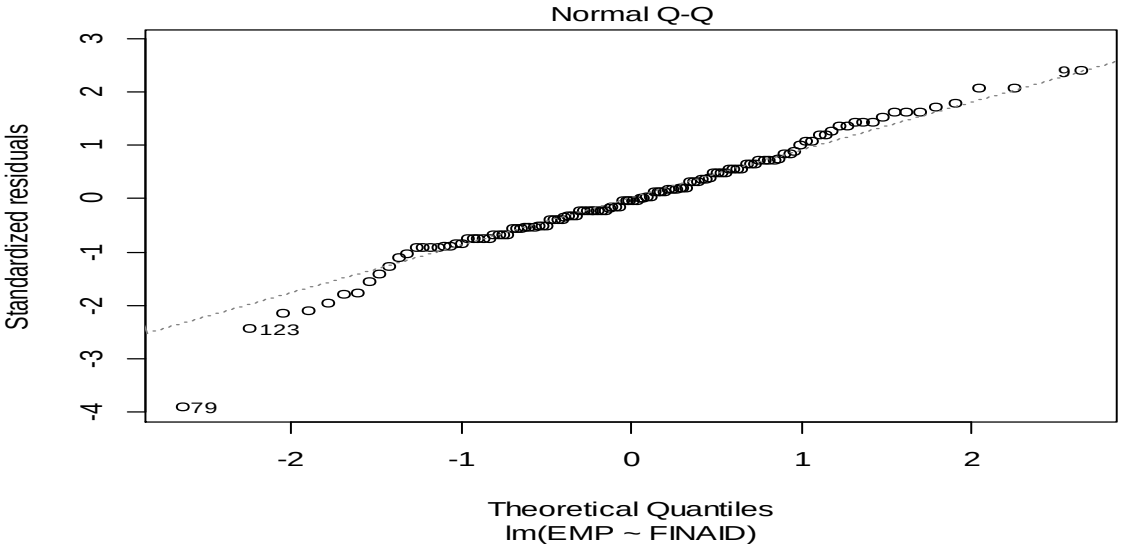

**Empathy vs.. Socioeconomic Status**

Coefficients:

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 37.960 | 1.147 | 33.106 | <2e-16 *** |
| FINAIDPartial | -3.122 | 1.484 | -2.104 | 0.0375 * |
| FINAIDNone | -1.710 | 1.365 | -1.253 | 0.2127 |

Signif. Codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

The responses were sufficiently normally distributed as shown below



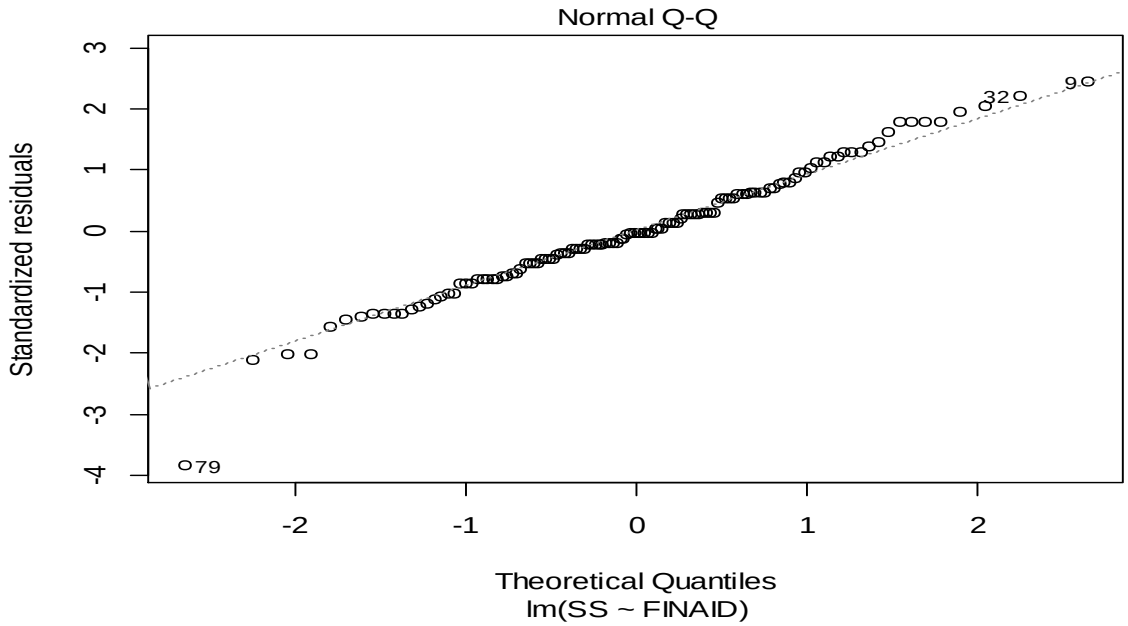

**Social Skills vs. Socioeconomic Status**

Coefficients:

| | Estimate | Std. Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| (Intercept) | 36.360 | 1.218 | 29.859 | <2e-16 *** |
| FINAIDPartial | -3.603 | 1.576 | -2.286 | 0.024 * |
| FINAIDNone | -1.177 | 1.449 | -0.812 | 0.419 |

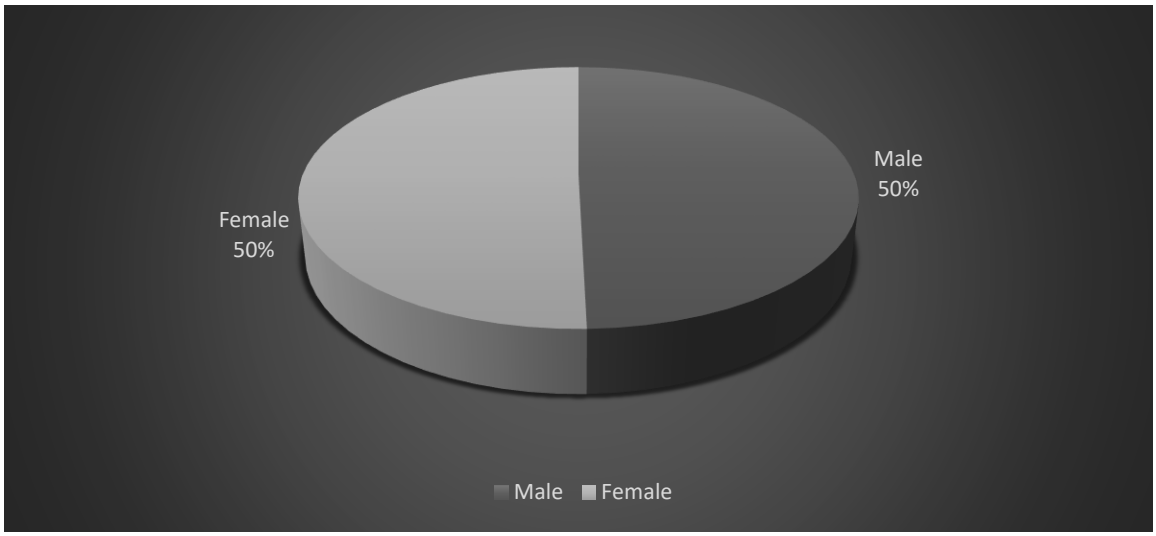
Signif. Codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Below is a diagram that indicates how the data is sufficiently normally distributed:



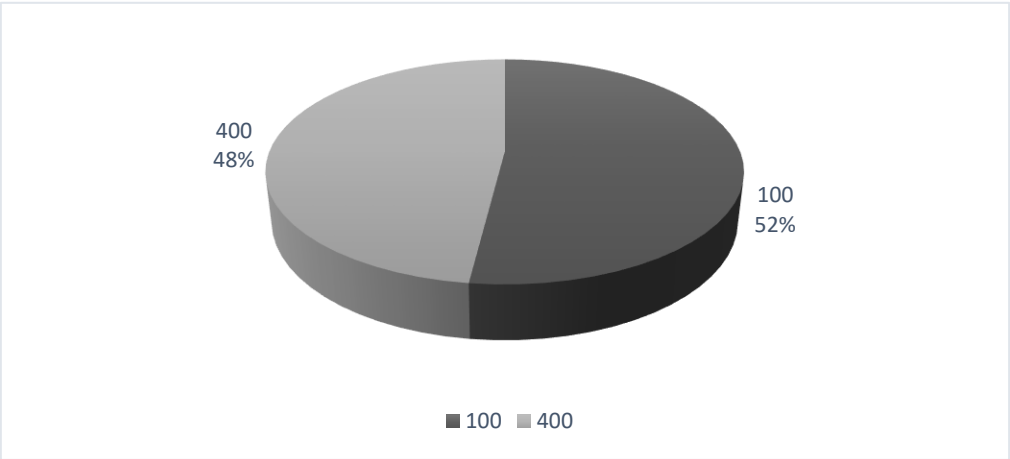
***Appendix 2.0:***

**Appendix 2.1 Gender Distribution of Respondents**



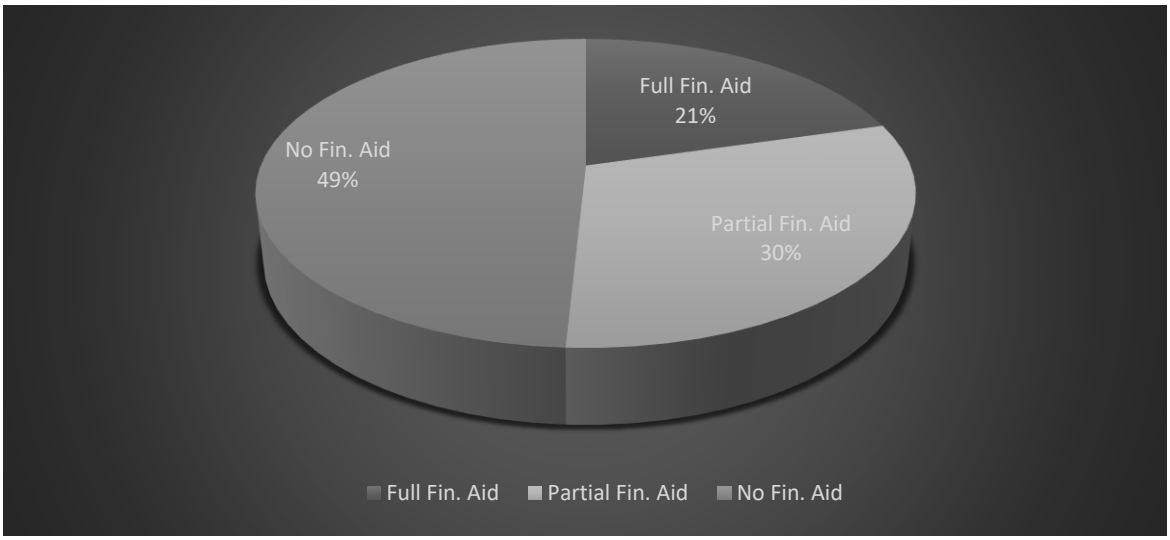

From the chart above, it appeared that there was an equal distribution in the gender of the respondents. That is, 50% females and 50% males.

**Appendix 2.2 Class Distribution**



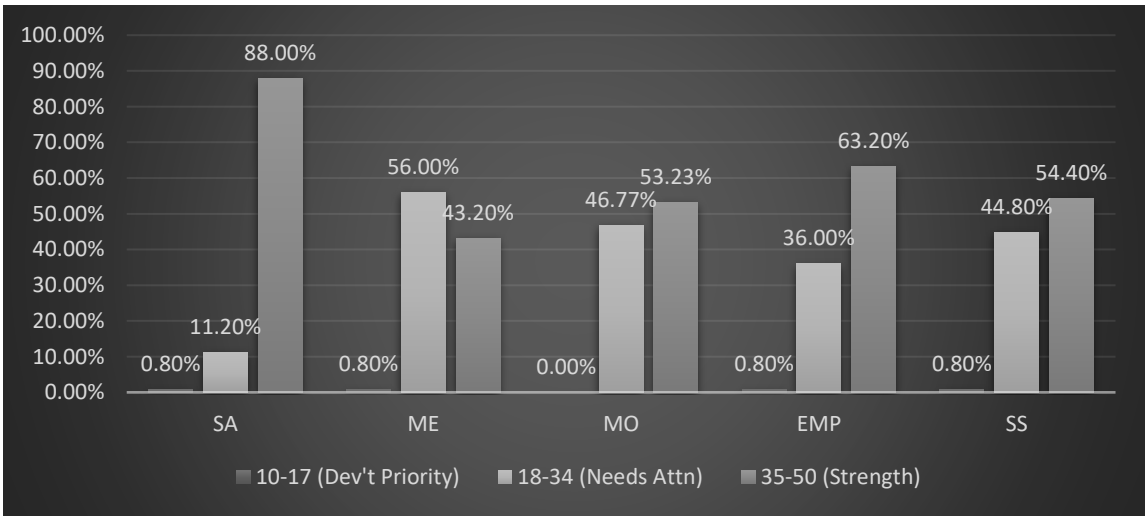

The pie chart above indicates that 48% of the sample were students in Level 400 while 52% were students in Level 100.

**Appendix 2.3: Distribution of Respondent's Socioeconomic Status**




Out of the 125 respondents, 49% had no financial aid, 30% were on partial financial aid, and 21% were on full financial aid. This was quite representative since 29% of the school's population are on full scholarship, 26% are on partial scholarship, and 45% have no scholarship.

**Appendix 2.4 Emotional Intelligence Level of Respondents**

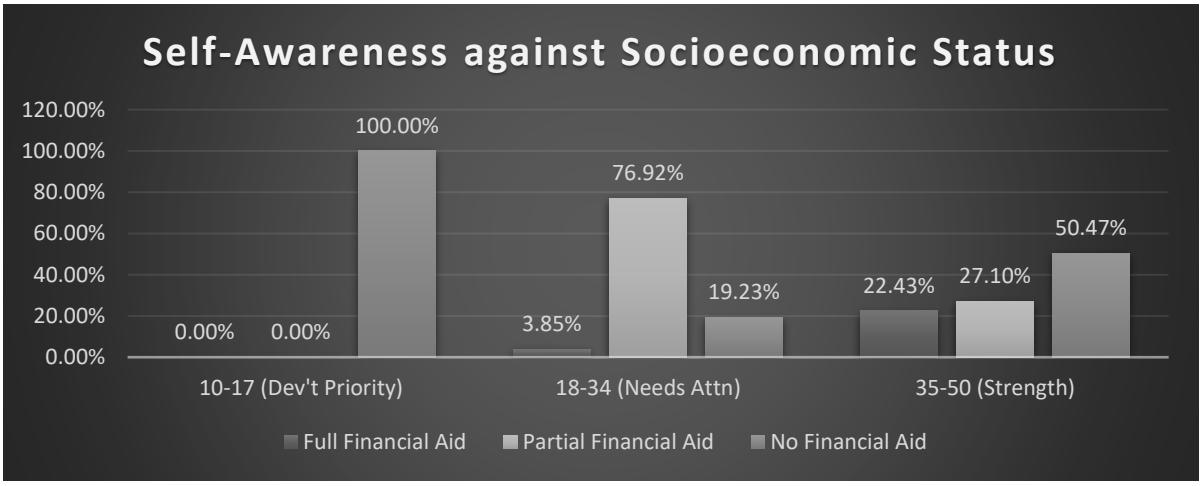



The side-by-side graph above explains the level of emotional intelligence of the respondents. That is, whether each of the variables including self-awareness (SA), managing emotions

(ME), motivating oneself (MO), empathy (EMP), and social skills (SS) are strengths, needs attention, or a development priority. In terms of self-awareness, 88% of the respondents have strength in that field, 11.20% needs attention, and 0.00% as a development priority, indicating a very good outcome. With managing emotion, 43.20% of the respondents had strength in that field, 56.00% needs attention, and is a development priority for 0.8% of the respondents. This is not as good as the self-awareness outcome.

Similar to that of self-awareness, the outcome was quite good for motivating oneself. 53.23% of the respondents had strength in this area, 46.77% needed attention but no one was in the development priority bracket. Also, while 0.8% each indicated empathy and social skills as a development priority, 36% and 44.8% indicated the need for attention, and 63.2% and 54.4% indicated strength for empathy and social skills respectively. This shows that only a few of the students of Ashesi University College are struggling with issues of emotional intelligence.

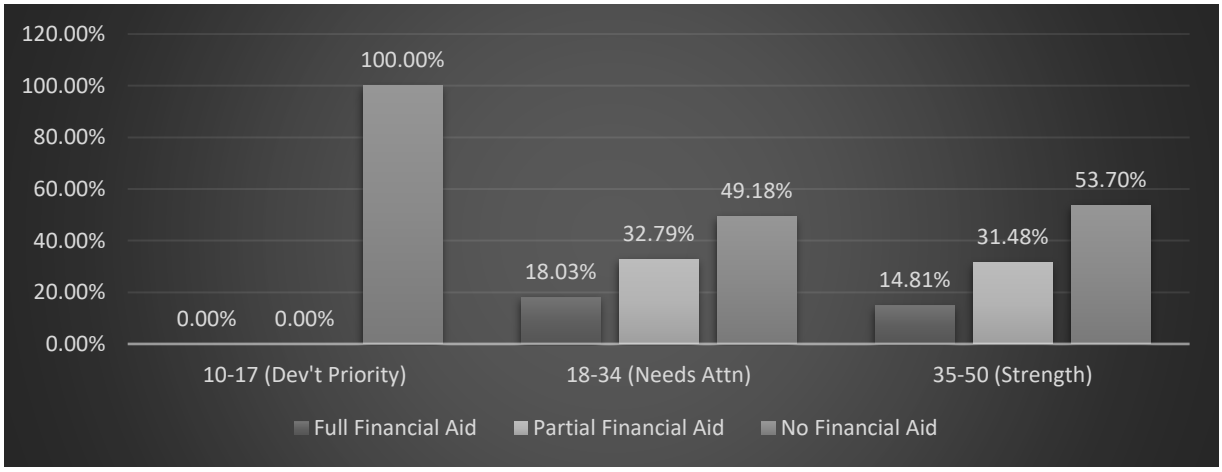
**Appendix 2.5 Self-Awareness against Socioeconomic Status**




The diagram shows the relationship between socioeconomic status of students and their level of self-awareness. From the diagram, it can be seen that 100% of the students who needed to make self-awareness their development priority were those without financial aid. 79.2% of

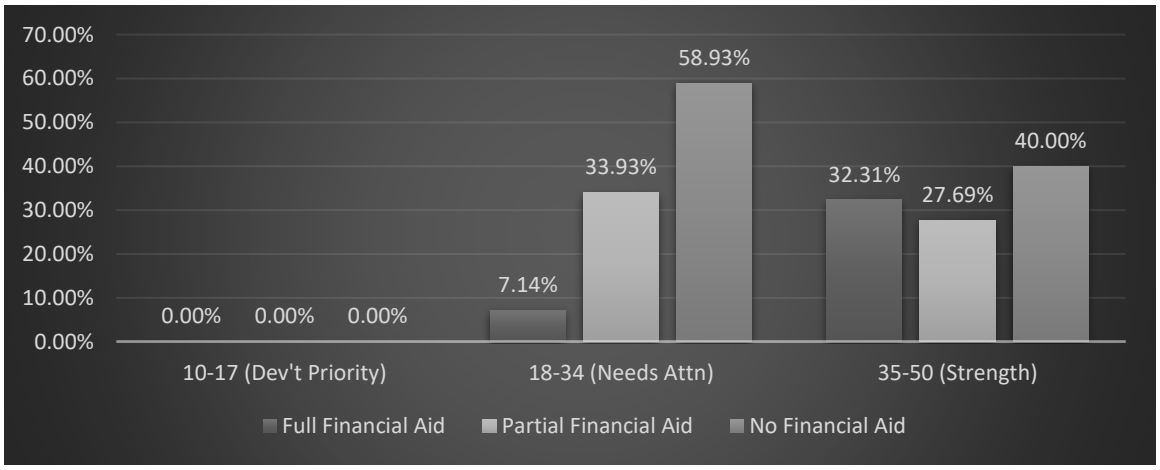
students who needed attention for their self-awareness were those on partial financial aid, followed by 19.23% were those on no financial aid, and then 3.85% were those on full financial aid. Also, while 50.47% of students with strength in their self-awareness were not on full scholarship, about 27% were those on partial financial aid, about 22% were students on full financial aid.

**Appendix 2.6 Managing Emotions versus Socioeconomic Status**



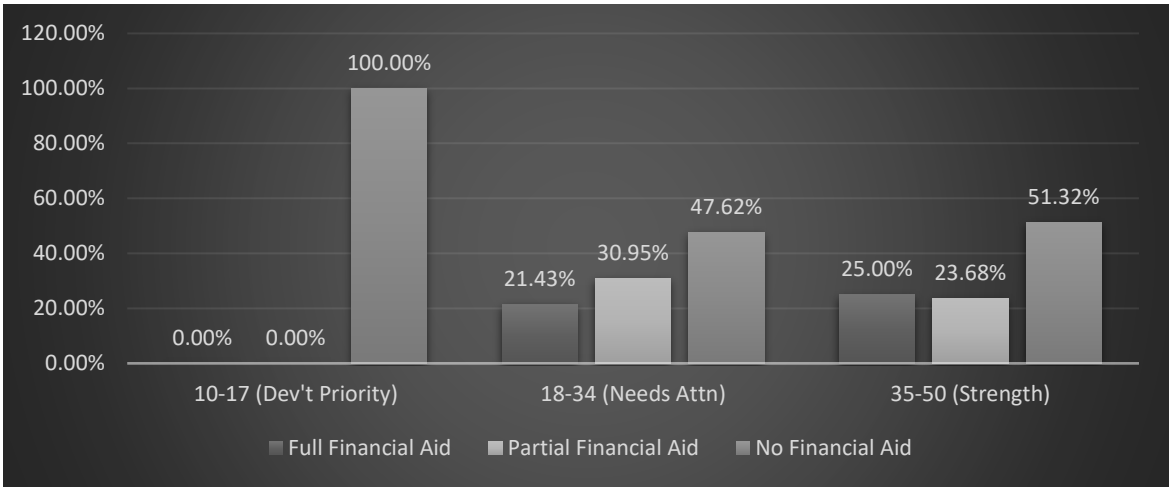

From the diagram above, it appeared that students without financial aid were the only ones who needed to make managing their emotions a development priority. However, they also had the largest percentages for both the ‘needs attention’ and ‘strength’ bracket, followed by those on partial financial aid, then those on full financial aid.

**Appendix 2.7 Motivating Oneself versus Socioeconomic Status**



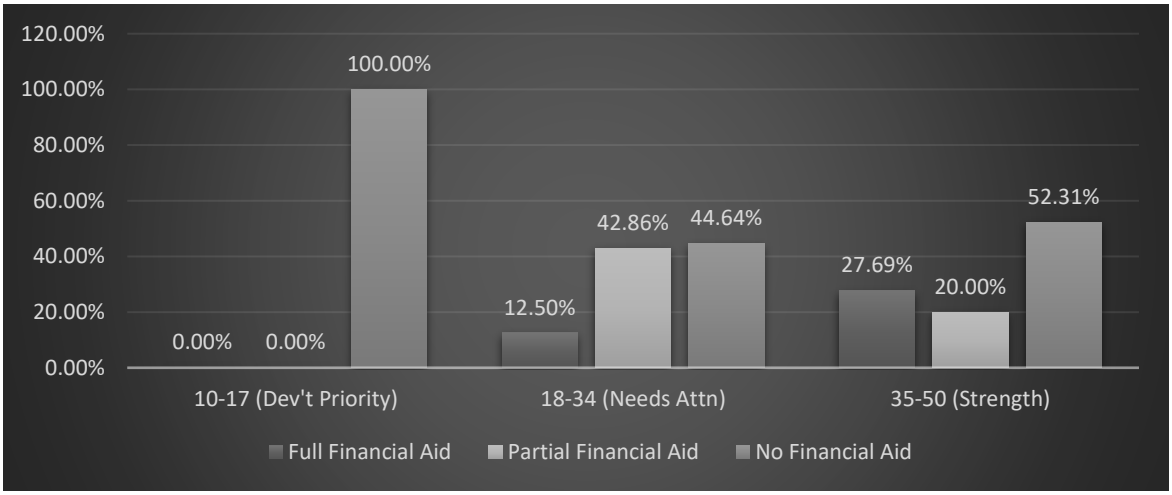
Unlike the previous, no student fell within the ‘development priority’ bracket. This means that the emotional intelligence level of the students was quite good. However, it appeared that more students without scholarship need attention and at the same time have strength in motivating themselves.

**Appendix 2.8 Empathy versus Socioeconomic Status**




From the diagram, it appeared that students without scholarship tend to have larger percentages in all the three levels of emotional intelligence.

**Appendix 2.9 Social Skills versus Socioeconomic Status**




This chart is similar to the previous. However, students on partial and without scholarship were around the same percentage for the ‘needs attention bracket’.

*Appendix 3.0*

## Appendix 3.1: Keys to Coded Questionnaires

| | KEYS | | | KEYS | | | KEYS |
|---|---|---|---|---|---|---|---|
| **Gender** | | | **Academic Adv** | | | **Educational Level** | |
| Male | 1 | | Yes | 1 | | No Education | 1 |
| Female | 2 | | No | 2 | | Primary | 2 |
| | | | | | | JSS/JHS | 3 |
| **Major** | | | **Met with Adv** | | | Secondary/SHS | 4 |
| Bus. Administration | 1 | | Yes | 1 | | Tertiary/Voc/Tech | 5 |
| Computer Science | 2 | | No | 2 | | Masters | 6 |
| Mgt Info. Systems | 3 | | | | | PhD | 7 |
| Engineering | 4 | | **Diff. Finding Friends** | | | Other | 8 |
| | | | Yes | 1 | | | |
| **Nationality** | | | No | 2 | | **Decided on Major** | |
| Ghanaian | 1 | | | | | Yes | 1 |
| Other | 2 | | **Financial Status** | | | No | 2 |
| | | | Full financial aid | 1 | | | |
| **First to be in University** | | | Partial financial aid | 2 | | **Emotional Intelligence** | |
| Yes | 1 | | No financial aid | 3 | | Self-awareness | SA |
| No | 2 | | | | | Managing emotions | ME |
| | | | **Cumulative GPA** | | | Managing oneself | MO |
| **School Type** | | | 2-2.50 | 1 | | Empathy | EMP |
| Public | 1 | | 2.51-3.0 | 2 | | Social skill | SS |
| Private | 2 | | 3.01-3.50 | 3 | | | |
| Mostly (Both) | 3 | | 3.51-4.00 | 4 | | | |
| | | | Other | 5 | | | |

**Appendix 3.2: Sample Administered Questionnaire (Level 400)**

**Welcome to the College Experience Survey!**

We are grateful to have you as a participant of this survey! The survey aims at investigating how socioeconomic status and college experience influence the emotional intelligence level of Ashesi University College students. It will only take about 15-20minutes to complete. Your responses will be used as a tool for enhancing academic performances in the school by improving the emotional intelligence level of **all** students. This study and consent form has been reviewed and approved by Ashesi Institutional Review Board for Human Subject Research. For further information, contact the committee through irb@ashesi.edu.gh.

***Kindly Turnover*** ➡

**Section A**

***Kindly tick your choice of answer***

1. What is your gender?
   - ☐ Male
   - ☐ Female

2. What is your major?
   - ☐ Business Administration
   - ☐ Computer Science
   - ☐ Management Information Systems
   - ☐ Engineering

3. What is your nationality?

   _____

***Kindly Turnover*** ➡

**Section B**

***Kindly read the statements below and decide how strongly each applies to you.***

***1*** *=never like me,* ***2*** *= occasionally like me,* ***3*** *= sometimes like me,* ***4*** *= frequently like me,* ***5*** *= always like me*

| | | | | | |
|---|---|---|---|---|---|
| 4. I realise immediately when I lose my temper | 1 | 2 | 3 | 4 | 5 |
| 5. I can 'reframe' bad situations quickly | 1 | 2 | 3 | 4 | 5 |
| 6. I am always able to motivate myself to do difficult task quickly | 1 | 2 | 3 | 4 | 5 |
| 7. I am always able to see things from the other person's view point | 1 | 2 | 3 | 4 | 5 |
| 8. I am an excellent listener | 1 | 2 | 3 | 4 | 5 |
| 9. I know when I am happy | 1 | 2 | 3 | 4 | 5 |
| 10. I am less sensitive and have control over my emotions | 1 | 2 | 3 | 4 | 5 |
| 11. I'm able to prioritise important activities to work and get on with them | 1 | 2 | 3 | 4 | 5 |
| 12. I am excellent at empathising with someone else's problem | 1 | 2 | 3 | 4 | 5 |
| 13. I never interrupt other people's conversation | 1 | 2 | 3 | 4 | 5 |
| 14. I usually recognize when I am stressed | 1 | 2 | 3 | 4 | 5 |
| 15. Others can rarely tell what mood I am in | 1 | 2 | 3 | 4 | 5 |
| 16. I always meet deadlines | 1 | 2 | 3 | 4 | 5 |
| 17. I can tell if someone is not happy with me | 1 | 2 | 3 | 4 | 5 |
| 18. I am good at adapting and getting along with a variety of people | 1 | 2 | 3 | 4 | 5 |
| 19. When I am being emotional I am aware of this | 1 | 2 | 3 | 4 | 5 |
| 20. I rarely lose my temper unexpectedly at other people | 1 | 2 | 3 | 4 | 5 |
| 21. I never waste time | 1 | 2 | 3 | 4 | 5 |
| 22. I can tell if a team of people are not getting along with each other | 1 | 2 | 3 | 4 | 5 |
| 23. People are the most interesting thing in my life for me | 1 | 2 | 3 | 4 | 5 |

***Kindly Turnover*** ⟶

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|---|---|---|---|---|---|
| 24. When I am anxious, I usually account for the reasons | 1 | 2 | 3 | 4 | 5 |
| 25. Difficult people do not annoy me | 1 | 2 | 3 | 4 | 5 |
| 26. I go straight to the point when speaking | 1 | 2 | 3 | 4 | 5 |
| 27. I can usually understand why people are being difficult towards me | 1 | 2 | 3 | 4 | 5 |
| 28. I love to meet new people and get to know what motivates them | 1 | 2 | 3 | 4 | 5 |
| 29. I always know when I am unreasonable | 1 | 2 | 3 | 4 | 5 |
| 30. I can consciously change my state of mind | 1 | 2 | 3 | 4 | 5 |
| 31. I believe you should do the difficult things first | 1 | 2 | 3 | 4 | 5 |
| 32. Other individuals are not ‘difficult’ but just ‘different’ | 1 | 2 | 3 | 4 | 5 |
| 33. I need a variety of work colleagues to make my job interesting | 1 | 2 | 3 | 4 | 5 |
| 34. Awareness of my emotions is very important to me at all times | 1 | 2 | 3 | 4 | 5 |
| 35. I do not let stressful situations or people affect me | 1 | 2 | 3 | 4 | 5 |
| 36. I can resist temptations of an immediate reward and wait for a later reward | 1 | 2 | 3 | 4 | 5 |
| 37. I can understand if I am being unreasonable | 1 | 2 | 3 | 4 | 5 |
| 38. I like to ask questions to find out what it is important to people | 1 | 2 | 3 | 4 | 5 |
| 39. I can tell if someone has upset or annoyed me | 1 | 2 | 3 | 4 | 5 |
| 40. I rarely worry about work or life in general | 1 | 2 | 3 | 4 | 5 |
| 41. I believe in working as scheduled | 1 | 2 | 3 | 4 | 5 |
| 42. I can understand when my actions sometimes offend others | 1 | 2 | 3 | 4 | 5 |
| 43. I see working with people as simply a challenge to win them over | 1 | 2 | 3 | 4 | 5 |
| 44. I can let anger ‘go’ quickly so that it no longer affects me | 1 | 2 | 3 | 4 | 5 |
| 45. I can suppress my emotion when I need to | 1 | 2 | 3 | 4 | 5 |

***Kindly Turnover*** ➡

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|---|---|---|---|---|---|
| 46. I can always motivate myself even when I feel low | 1 | 2 | 3 | 4 | 5 |
| 47. I can sometimes see things from others' point of view | 1 | 2 | 3 | 4 | 5 |
| 48. I am good at reconciling differences with other people | 1 | 2 | 3 | 4 | 5 |
| 49. I know what makes me happy | 1 | 2 | 3 | 4 | 5 |
| 50. Others often do not know how I am feeling about things | 1 | 2 | 3 | 4 | 5 |
| 51. Motivations has been the key to my success | 1 | 2 | 3 | 4 | 5 |
| 52. Reasons for disagreement are always clear to me | 1 | 2 | 3 | 4 | 5 |
| 53. I generally build solid relationship with those I work with | 1 | 2 | 3 | 4 | 5 |

***Kindly Turnover*** ➡

**Section C**

54. Are you the first person to attend University in your family?

- ☐ Yes
- ☐ No

55. Did you attend a public or private senior high school?

_____

56. What is your mother's profession?

_____

57. What is your father's profession?

_____

58. What is your mother's highest level of education?

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59. What is your father's highest level of education?

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60. What language is spoken at home?

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61. What is your current cumulative GPA?

- ☐ 2.00 – 2.50
- ☐ 2.51 – 3.00
- ☐ 3.01 – 3.50
- ☐ 3.51 – 4.00

***Kindly Turnover*** ➡

62. What was your cumulative GPA after level 100?

- ☐ 2.00 – 2.50
- ☐ 2.51 – 3.00
- ☐ 3.01 – 3.50
- ☐ 3.51 – 4.00

63. Which course(s) in first year left a strong impression on you and contributed significantly to who you are today? Please explain

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64. Were you assigned a mentor or academic advisor in your first year?

- ☐ Yes
- ☐ No

***If you chose 'YES', kindly answer next question. Otherwise, move to question 65.***

65. How effective was this mentor-mentee or advisor-advisee relationship?

- ☐ Very effective
- ☐ Effective
- ☐ Moderately effective
- ☐ Ineffective

66. What influenced your ability to adjust in Ashesi during your first year?

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67. Does the school provide you with Financial Aid?

- ☐ Yes
- ☐ No

***Kindly Turnover*** ➡

***If 'YES', kindly answer question 68.***

68. Which of the following applies to your type of financial aid? (*select all that applies*)

- ☐ Accommodation
- ☐ Meal Plan
- ☐ Tuition
- ☐ Semester Stipend
- ☐ Other ……