THE BIG FIVE PERSONALITY CORRELATES OF ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENTS

A STUDY OF MAKERERE UNIVERSITY

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DECLARATION

I, ISA SSEMYALO, hereby declare that this is my original copy of the research proposal made out of my own effort as a partial fulfillment of requirements of the award of the Bachelor of arts in social sciences at Makerere university and has never been submitted to any other institute of higher learning for any award.

Signature..... Date..01st/09/2026

ISA SSEMYALO

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APPROVAL

I certify that this work was carried out under my supervision and has been satisfactory.

Signature..... Date.....01/09/26

Prof. Peter Baguma

Research supervisor

DEDICATION

This work is dedicated to my family for their continuous support, encouragement and inspiration throughout my academic journeys

ACKNOWLEDGEMENT

First and foremost, I give my sincere thanks to Almighty God for granting me the strength, wisdom, good health, and guidance that enabled me to successfully undertake and complete this research proposal.

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I also extend my sincere appreciation to the lecturers and staff of Makerere University for providing a conducive academic environment that fostered learning, critical thinking, and academic growth throughout my course of study. Their dedication to teaching, mentorship, and academic excellence greatly enhanced my knowledge and understanding of research. The guidance, support, and resources they provided played a significant role in shaping my academic journey and contributed immensely to the successful development of this research proposal.

Finally, I wish to express my heartfelt gratitude to my family and friends for their unwavering support, encouragement, patience, and understanding throughout this academic journey. Their motivation and assistance were instrumental in completing this research proposal.

ABSTRACT

This study examines the relationship between personality traits and academic performance among undergraduate students at Makerere University in Kampala, Uganda. The study is guided by the Five-Factor Model of personality, which comprises conscientiousness, openness to experience, extraversion, agreeableness, and neuroticism. Personality traits have been widely recognized as important psychological factors that influence students' attitudes toward learning, study habits, motivation, time management, interpersonal relationships, and overall academic achievement. While previous studies are connected to the variables most of this evidence originates from Western countries, with limited research focusing on African contexts.

The study used a quantitative cross-sectional design to examine the relationship between personality traits and academic performance among undergraduate students at Makerere University. Data was collected from a representative sample using a structured questionnaire adapted from the Big Five Personality Inventory (BFI), while academic performance was measured using self-reported GPA. Stratified random sampling was used to ensure representation across different colleges and years of study

Data analysis was conducted using the Statistical Package for Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the characteristics of the respondents and the study variables. The findings of this study contributed to the growing body of knowledge on personality and academic performance and provide useful insights for students, lecturers, counsellors, and university administrators. Furthermore, the findings informed the development of evidence-based interventions and academic support programs aimed at improving student success in higher education institutions within Uganda and the broader African context.

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LIST OF ABBREVIATIONS AND ACRONYMS ABBREVIATION

1. APA: AMERICAN PSYCHOLOGICAL ASSOCIATION

2. BFI: BIG FIVE INVENTORY

3. CGPA: CUMULATIVE GRADE POINT AVERAGE

4. CHUSS: COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

5. FFM: FIVE-FACTOR MODEL

6. GPA: GRADE POINT AVERAGE

7. SPSS: STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES

8. STEM: SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

CHAPTER ONE

INTRODUCTION

Academic performance is a key determinant of success in higher education, and it is frequently used to assess future professional potential, institutional efficacy, and student competence.

Academic performance among university students varies considerably, with students exhibiting high, moderate, and low levels of achievement. Research indicates that only a small proportion of students consistently attain outstanding academic results, while the majority perform at moderate levels and a smaller proportion experience academic difficulties (Poropat, 2009). In the Ugandan context, although universities continue to produce high performing graduates each year, only a relatively small percentage attain the highest academic distinctions, suggesting the need to investigate the personal factors that contribute to exceptional academic performance. Understanding the personality traits associated with high academic achievement may provide valuable insights into why some students consistently outperform others despite studying in similar academic environments.

Academic performance is the degree to which a student has met their learning objectives typically determined by grades, that is to say Grade Point Average (GPA), test scores, or other academic evaluation methods (Shavelson et al., 1976). Although universities strive to create environments that support academic performance, students with similar intellectual capacities often achieve varying degrees of success. This variation suggests that academic outcomes may be significantly influenced by non-cognitive factors, especially personality traits.

In competitive learning environments like Makerere University, understanding the determinants of good academic achievement can guide a student's development and learning methods. It is particularly crucial to understand these determinants.

The term personality refers to the enduring patterns of thinking, feeling, and behaving that distinguish individuals from one another and remain relatively stable across time and

situations “Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to the environment” (Allport.G.W. 1937). Personality traits are relatively stable patterns of behavior, thoughts, and emotions that characterize individuals, The Five-Factor Model, which includes conscientiousness, agreeableness, extraversion, neuroticism, and openness to experience, is one of the most widely recognized frameworks for understanding personality. These characteristics have been repeatedly found to influence learning habits, motivation, and self-regulation, each of which is essential for academic achievement (McCrae & Costa, 1999).

Conscientiousness is the most reliable and powerful predictor of academic success among the Big Five personality traits. Conscientious students demonstrate discipline, perseverance, planning, and goal-oriented behaviour, which improves study habits and academic

engagement. According to a thorough meta analysis (Poropat, 2009), Conscientiousness had effect sizes comparable to those of intelligence, this could also mean that the influence on the academic outcome due to conscientiousness was almost as strong as the influence of intelligence and was positively correlated with academic success across all educational levels.

Academic outcomes have also been linked to other characteristics such as personality. While high levels of neuroticism might impair performance through anxiety and emotional instability, openness to experience is linked to intellectual curiosity and deep learning processes (Richardson et al., 2012)

Academic performance in higher education has been extensively researched worldwide in connection with psychological traits, socioeconomic variables, and cognitive capacities. Personality qualities have received more attention in recent decades as important indicators of academic performance.

In a variety of educational institutions, studies based on the Five-Factor Model of personality show that non-cognitive attributes have a major impact on academic results. Conscientiousness, which reflects qualities like perseverance, organisation, and self discipline, has been repeatedly

found to be the best personality predictor of academic success. According to an analysis of psychological predictors of academic performance, personality qualities and self control account for a significant portion of the variance in university students' achievements that go beyond intellect. Research based on the Five Factor Model also highlights how personality affects learning behaviours, goal orientation, and emotional control, all of which affect academic achievement

The significance of behavioural and psychological aspects in student progress in African higher education contexts has been a notable key. Academic retention, performance gaps, and students' adaptation to the demands of higher education are issues that universities in Africa must deal with, According to the research conducted at African universities, personality qualities like conscientiousness, emotional stability, and openness to new experiences affect students' study habits, perseverance, and academic engagement (Chamorro-Premuzic& Furnham, 2003). Nonetheless, a large portion of the empirical research on personality and academic success still comes from Western societies. Context specific research is necessary since African institutions differ in their sociocultural environments, educational systems, and student experiences. To gain a better understanding of the psychological predictors of academic achievement in African colleges and institutions, researchers have highlighted the necessity of conducting localized studies(Richardson et al., 2012)

Higher education institutions in Uganda are essential to the country's development since they provide knowledge and train qualified professionals. For educators and policymakers, university students' academic achievement is consequently a major concern. Makerere University, one of the top universities in Africa and Uganda in particular, offers an appropriate setting for researching psychological aspects of academic success. The various academic and sociocultural elements that students encounter at Ugandan institutions may have an impact on how personality traits influence learning behaviour and performance. Therefore, it is crucial to look at the

personality traits of high achievers in the Ugandan setting in order to produce locally relevant research that may guide student development initiatives, academic counselling, and institutional methods meant to enhance academic results.

There is little empirical data analysing the connection between personality traits and academic achievement among Ugandan university students, despite the expanding corpus or loads of foreign research. The majority of the research now in publication is based on Western people, whose learning environments, sociocultural influences, and educational contexts are different from those of African institutions. As such, it is unclear if these findings apply to university students in African specifically in Uganda. Examining the personality traits of high achievers in this setting could yield locally pertinent and relevant information on the elements that promote academic success.

Therefore, this study seeks to examine personality correlates of high academic achivers in the university settings, that's to say in Makerere university. By identifying personality characteristics associated with academic success, the study aims to contribute to the understanding of non cognitive determinants of academic achievement and provide evidence concerning this topic.

1.2 Problem Statement

Personality traits have been widely recognized as important predictors of academic performance, with conscientiousness consistently identified as the most robust correlate of academic success, however, the role of other traits such as openness to experience and extraversion remains inconsistent across studies (Poropat, 2009) Additionally, much of the existing research relies on relatively homogeneous samples, often limited to specific groups such as psychology students, thereby restricting the generalizability of findings and overlooking potential differences across academic disciplines. Evidence suggests that the personality traits associated with high academic performance may vary depending on the nature of the field of study, such as structured disciplines like STEM, compared to more creative fields like the arts (Hartmann & Ertl, 2023).

In Uganda, particularly at Makerere University, there is limited empirical research examining how personality traits relate to high academic performance across diverse academic programs, making it difficult for universities to design tailored academic support systems that leverage individual student strengths. Therefore, this study seeks to examine the Big Five personality profiles of high-achieving students across different disciplines to determine which traits are universally beneficial.

1.3 Purpose of the study

The purpose of this study is to examine the relationship between personality traits and academic performance among undergraduate students at Makerere University. Specifically, the study seeks to investigate how the five major dimensions of the five factor model that's to say conscientiousness, openness to experience, extraversion, agreeableness, and neuroticism are associated with high academic performance. The study aims to identify the personality traits that characterize academic performance and determine the extent to which these traits contribute to academic success among university students.

1.4 Specific Objectives

The study has the following objectives

1. To identify the dominant personality traits among high academic-performing students.

2. To determine the extent to which personality traits predict academic performance among undergraduate students.

1.5 Significance of the Study

This study has contributed to the creation of new knowledge regarding the relationship between personality traits and academic performance among university students

This study has made a significant contribution to the understanding of the role of personality traits in shaping high academic performance among university students. By examining the Big Five personality dimensions in relation to academic achievement, the study

provided a deeper insight into the non-cognitive factors that underpin academic excellence, thereby extending existing psychological and educational research.

The findings have been valuable to students, as they enhanced self awareness regarding how individual personality characteristics influence learning behaviours, motivation, and academic outcomes. This awareness may enable students to adopt more effective and personalized study strategies that align with their inborn traits.

New knowledge was discovered between personality and academic performance, for lecturers and academic staff**,** the study offered evidence based insights into individual differences in learning, which may inform more adaptive teaching approaches and student engagement strategies. Understanding personality variations among students can support the development of inclusive practices that cater to diverse learning needs.

The study was also of practical importance to university administrators and academic counsellors at Makerere University, as it provided empirical data that can inform the design and implementation of targeted academic support programs, mentoring initiatives, and counselling interventions aimed at enhancing student performance.

Furthermore, the study contributed to the limited body of literature on personality and academic achievement within the Ugandan context. Given that most existing studies are based on Western populations, this research provided context specific evidence that enhances the applicability of personality research in African higher education settings. It also served as a foundation for future scholarly work exploring psychological determinants of academic success across diverse educational environments and handle stimulation of research as the dissertation was used as references among researchers on academic performance.

1.6 Scope of the Study

1.6.1 Content scope

This study focused on examining the relationship between personality traits and academic performance among university students. Specifically, it investigated the Big Five personality traits conscientiousness, openness to experience, extraversion, agreeableness, and neuroticism, as the independent variables, and academic performance, measured using Grade Point Average (GPA), as the dependent variable. The study primarily concentrated on identifying personality characteristics associated with high academic performance.

1.6.2 Geographical Scope

The study was conducted at Makerere University, located in Kampala, Uganda. The university is based on Makerere Hill on the seven hills that make up Kampala City, located in Kawempe Division, north of Kampala City and 5km from the city center. The university provides an appropriate setting due to its diverse student population and range of academic programs.

1.6.3 Time scope

The study findings are applicable from 1986 to the present, this is when the government of Uganda started to emphasise student school performance.

1.7 Conceptual Framework

The conceptual framework illustrates the relationship between the independent and dependent variables in the study. The independent variable is personality traits, conceptualized using the Big Five personality dimensions: conscientiousness, openness to experience, extraversion, agreeableness, and neuroticism. These traits influence students' behaviors, motivation, study habits, and emotional regulation, and the dependent variable being high academic performance as it is influenced by the big five personality traits. (see figure 1)

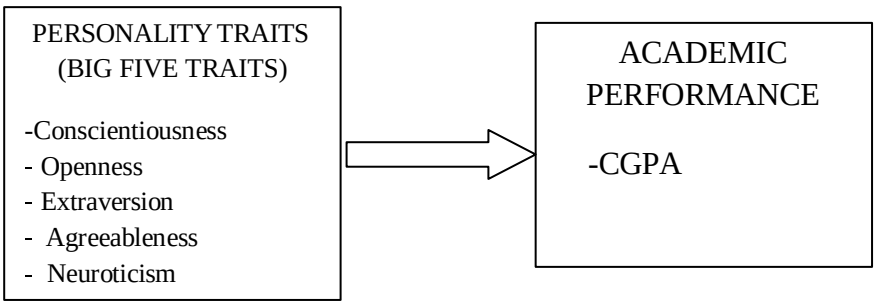


Figure 1: Showing the relationship between personality traits and hacademic performance among university students

The conceptual framework shows that the big five personality traits, influence students' academic performance. These personality traits are considered important individual characteristics that shape students' attitudes, behaviours, and approaches toward learning and academic activities. Academic performance, measured using Grade Point Average (CGPA), As shown in the conceptual frame work diagram,

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Understanding the factors that influence academic performance has been a central concern in educational and psychological research. While intelligence has traditionally been emphasized, growing evidence shows that personality traits play an equally important role in determining academic success. Personality influences how students think, feel, and behave in academic environments, thereby shaping study habits, motivation, and overall performance.

This chapter reviews theoretical and empirical literature on the relationship between personality traits and high academic performance as well as high academic performers, with particular relevance to university students at Makerere University.

2.2 Theoretical Perspectives On Personality And Academic Performance

This study is grounded in Walberg's Theory of Educational Productivity, which explains academic performance as a function of multiple interacting influences rather than a single factor. Walberg (1984) proposes that student learning is shaped by a combination of individual, instructional, and environmental variables, often summarized as learning being influenced by ability, motivation, instruction, and the learning environment. This framework is particularly relevant for understanding the relationship between personality and academic performance because personality traits can be viewed as part of the learner's motivational and dispositional characteristics that interact with other educational inputs to influence achievement (Walberg, 1984).

Within Walberg's model, student characteristics such as ability and motivation are central determinants of learning outcomes. Personality traits, such as conscientiousness, openness, and emotional stability, can be understood as influencing these characteristics, particularly motivation, persistence, and time management in learning tasks. For instance, students with high conscientiousness are more likely to be disciplined, goal-oriented, and persistent, which

enhances their engagement with academic work and improves performance outcomes (Walberg, 1984).

The theory also emphasizes the importance of instructional factors, such as the quality and quantity of teaching. Even when students possess positive personality traits, their academic performance is significantly shaped by how effectively instruction is delivered. Supportive and well-structured teaching can enhance the learning benefits associated with positive personality traits by providing clear goals, feedback, and reinforcement (Walberg, 1984).

In addition, Walberg highlights the role of the psychosocial and environmental context, including home environment, peer influence, and classroom climate. These environmental factors interact with personality traits to shape academic outcomes. For example, students with strong motivation and positive personality characteristics may perform better in supportive environments, while negative peer influence or poor learning conditions may weaken the advantages of favorable personality traits (Walberg, 1984).

Overall, Walberg's Theory of Educational Productivity provides a comprehensive framework for this study by explaining academic performance as the result of interacting personal (including personality-related), instructional, and environmental factors, making it a suitable theoretical lens for examining how personality influences academic performance in a real educational context (Walberg, 1984).

2.3 Personality Traits As Predictors Of High Academic Performance.

A substantial body of research demonstrates that personality traits significantly predict academic performance, often complementing or even rivaling the predictive power of intelligence. Among the Big Five traits, conscientiousness has consistently emerged as the strongest predictor of academic success.

Conscientious students tend to be organized, disciplined, and goal oriented, which enables them to manage academic demands effectively (Poropat, 2009). Recent meta-analytic studies continue to support this finding, showing that conscientiousness predicts academic performance across different educational levels and cultural contexts (Gul-E-Zahra(Gul-E-Zahra et al., 2026). The relationship between conscientiousness and academic achievement can be

explained by its association with self-regulated learning behaviors. Students high in conscientiousness are more likely to plan their studies, adhere to schedules, and persist in completing tasks, all of which contribute to higher academic performance(Fuente et al., 2024). This suggests that conscientiousness operates not only as a direct predictor but also as an indirect factor influencing performance through behavioral processes.

Openness to experience is another trait that has been positively associated with academic performance. Students high in openness tend to be intellectually curious, imaginative, and receptive to new ideas, which enhances their engagement with academic material(Komarraju et al., 2011). However, its predictive strength is generally weaker than that of conscientiousness, indicating that curiosity alone is insufficient without disciplined study habits (Mammadov, 2022).

Extraversion presents a more complex relationship with academic performance. While extraverted students may benefit from active participation in discussions and collaborative learning environments, excessive sociability can lead to distractions and reduced study time (Chamorro-Premuzic & Furnham, 2003). Recent research suggests that extraversion may influence academic performance indirectly through self-efficacy, rather than having a strong direct effect (Basileo et al., 2024)

Agreeableness, characterized by cooperation and interpersonal warmth, has been found to have a relatively weak relationship with academic performance. Although agreeable students tend to have positive relationships with peers and instructors, these social advantages do not necessarily translate into higher academic achievement (O'Connor & Paunonen, 2007). Nonetheless, agreeableness may play a supportive role in collaborative learning contexts.

In contrast, neuroticism is generally negatively associated with academic performance. Students high in neuroticism often experience anxiety, stress, and emotional instability, which can interfere with concentration and learning (Poropat, 2009). However, some studies suggest that moderate levels of anxiety may motivate students to prepare more thoroughly, indicating that the relationship between neuroticism and performance may not be entirely linear (Mammadov, 2022).

2.4 Emerging Trends In Personality Research

Recent studies have expanded the scope of research on personality and academic performance by exploring new contexts and variables. One emerging area is the role of personality in digital and online learning environments. Research conducted during and after the COVID-19 pandemic indicates that personality traits influence students' ability to adapt to online learning, with conscientiousness and openness playing particularly important roles (Yang et al., 2025).

Another emerging trend is the examination of personality in relation to academic integrity. Studies suggest that conscientiousness is negatively associated with academic misconduct, while extraversion may increase the likelihood of engaging in dishonest behaviors (Wang & Zhang, 2022). These findings highlight the broader implications of personality traits beyond academic performance.

Furthermore, recent meta-analyses emphasize the importance of cultural and contextual factors in shaping the relationship between personality and academic performance. For example, a 2025 meta-analysis found that the strength of these relationships varies across cultural contexts and academic disciplines, suggesting that findings from Western populations may not be directly applicable to other regions(Trapmann et al., 2007).

2.5 Empirical Evidence From Global And Local Contexts

Empirical studies across different countries consistently demonstrate that personality traits are significant predictors of academic performance. Meta-analyses provide the strongest evidence, showing that conscientiousness is the most reliable predictor, followed by openness, while neuroticism has a negative effect (Poropat, 2009; Mammadov, 2022).

In higher education contexts, personality traits are particularly important because students are required to manage their own learning. This makes traits such as self-discipline and emotional stability critical for success. However, research in African contexts remains limited, with few studies focusing specifically on universities such as Makerere University.

This lack of local research highlights the need for context-specific studies to better understand how personality influences academic performance in Uganda.

2.6 Gaps in Literature

Despite extensive research, several gaps remain in the literature. First, there is a lack of studies conducted in Ugandan universities, limiting the applicability of existing findings. Second, most studies focus on general student populations rather than high-performing students. Third, cultural factors are often overlooked, despite their potential influence on personality and academic behaviour.

Finally, there is limited research on the mechanisms through which personality traits influence academic performance, particularly in non-Western contexts.

2.7 Conclusion

In conclusion, there is strong and consistent evidence in the literature that personality traits influence academic achievement in a variety of educational settings and cultural situations. As a predictor of academic performance, personality not only supports but sometimes even outperforms cognitive capacity, according to a large body of empirical research, especially meta-analytic studies (Poropat, 2009; Richardson et al., 2012). Conscientiousness has continuously shown itself to be the most robust and accurate predictor of good academic achievement among the Big Five personality traits. This is mainly because it is linked to important academic behaviors that are necessary for success in higher education, like organization, perseverance, time management, and goal-directed effort (Mammadov, 2022; Robert R. McCrae & Paul T. Costa Jr., 2008).

In addition to conscientiousness, other personality traits such as openness to experience, extraversion, agreeableness, and neuroticism have been shown to contribute to academic performance, although their effects tend to be more context dependent and generally weaker. For instance, openness to experience enhances intellectual curiosity and deep learning strategies, while extraversion may support participation in collaborative learning environments but also introduce potential distractions (Chamorro-Premuzic & Furnham, 2003). Similarly, neuroticism is often negatively associated with performance due to anxiety and emotional instability, although moderate levels of anxiety may sometimes serve as a motivational factor (Poropat, 2009).

Importantly, recent research has moved beyond direct relationships and emphasized the role of mediating variables such as motivation and self regulated learning in explaining how personality traits influence academic outcomes. Students with adaptive personality profiles, particularly high conscientiousness and low neuroticism, are more likely to engage in effective self regulatory practices such as planning, monitoring, and evaluating their learning processes, which in turn enhances academic performance (Fuente et al., 2024). Furthermore, motivational constructs such as self efficacy and intrinsic motivation have been identified as critical pathways through which personality traits exert their influence on academic success (Albert Bandura, 1986; Richardson et al., 2012).

Despite the strength of existing evidence, the literature reveals notable gaps that warrant further investigation. In particular, much of the research has been conducted in Western and Asian contexts, with limited representation from African settings. This raises concerns about the generalizability of findings to contexts such as Uganda, where cultural, institutional, and socio-economic factors may shape both personality expression and academic behavior differently. Additionally, relatively few studies have focused specifically on high academic performing students, who may exhibit distinct personality profiles and learning strategies compared to the general student population.

Therefore, there remains a critical need for localized and context-specific research within Ugandan higher education institutions, such as Makerere University, to better understand how personality traits interact with environmental and cultural factors to influence academic performance. Such research would not only contribute to the global literature but also provide practical insights for educational policy, student support services, and interventions aimed at enhancing academic success.

2.8 Hypothesis

The study has this hypothesis.

1: There is a significant relationship between personality traits and students' academic performance.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology employed in examining the relationship between personality traits and academic performance among undergraduate students. It outlines the research design, study area, population, sample size determination, sampling techniques, data collection methods, research instruments, validity and reliability, data analysis procedures, and ethical considerations. Methodological rigor is essential in ensuring that findings are valid, reliable, and generalizable. Empirical research has consistently emphasized the importance of systematic methodological frameworks in studying psychological and educational outcomes (Richardson et al., 2012)

3.2 Research Design

The study adopted a cross-sectional research design, which involved collecting data from respondents at a single point in time to examine relationships between variables. This design was appropriate for assessing associations between personality traits and academic performance without manipulating variables.

Cross-sectional quantitative designs have been widely used in educational and personality research due to their efficiency and ability to analyze relationships using statistical techniques. Previous empirical studies examining personality and academic achievement have successfully employed similar designs (Komarraju et al., 2011; Vedel, 2014).Furthermore, meta-analytic evidence supports the use of correlational approaches in understanding how personality traits influence academic outcomes (Poropat, 2009)

3.3 Setting

The study was conducted at Makerere University, located in Kampala, Uganda. The university's diverse student population, drawn from various socio-economic, cultural, and

academic backgrounds, provides an appropriate context for examining variability in personality traits and academic performance.

Kampala is Uganda's capital city and the country's main commercial, educational, and administrative centre. The district is characterized by a high level of economic activity, urbanization, and cultural diversity, attracting people from different regions of Uganda and neighboring countries. The city hosts numerous educational institutions, businesses, industries, and government offices, creating a dynamic socio economic environment. Students studying in Kampala are exposed to varying socio economic conditions, including differences in household income, employment opportunities, access to educational resources, and living standards, which may influence both personality development and academic outcomes.

The selection of Makerere University as the study area was therefore appropriate because it provided access to a heterogeneous student population with diverse socio-economic experiences and educational backgrounds. This diversity enhanced variability in psychological characteristics and academic achievement, thereby strengthening the explanatory power and generalizability of the study findings (Komarraju et al., 2011). ;

3.4 Study Population

The target population consisted of undergraduate students enrolled at Makerere University, the university comprises of approximately 36000 students. This group was suitable because academic performance can be measured using standardized grading systems, while personality traits can be assessed using validated psychometric frameworks or tests.

The heterogeneous nature of the population across disciplines, gender, and socio economic backgrounds supported the examination of differential personality effects across academic contexts (Vedel, 2014).

3.5 Sample Size Determination

The study employed the Krejcie and Morgan (1970) sample size determination table to establish an appropriate sample size from the target population. This table is widely used in

research to ensure that a representative sample is selected from a given population while maintaining statistical reliability at a 95% confidence level and a 5% margin of error. By using the Krejcie and Morgan table, the study will determine a scientifically acceptable sample size that ensures valid and generalizable findings. Therefore, the sample size for this study was 379 students who were derived from the total population which is estimated to 36000 and to ensure adequate representation of both genders the sample will be proportionally distributed due to their representation in the target population..

3.6 Sampling Techniques

The study employed stratified random sampling to ensure proportional representation of students across different academic units as stratification enhanced representativeness by capturing variability across subgroups.

This approach is consistent with empirical research practices in educational psychology, where stratified techniques are used to improve the accuracy and generalizability of findings (Komarraju et al., 2011). Simple random sampling will then be applied within each stratum to select respondents.

3.7 Data Collection Methods

Primary data was collected using a structured questionnaire. This method allows for standardized data collection and facilitates quantitative analysis of relationships between variables.

Survey based data collection has been widely used in studies examining personality and academic performance due to its efficiency and ability to capture large samples (Poropat, 2009; Richardson et al., 2012)

The questionnaire included:

1. Section A: Demographic information form to assess key participant characteristics, including age, gender, ethnicity, and current year of academic study, which will serve as control variables in the statistical analysis.

2. Section B: Personality traits were assessed by utilizing a validated psychometric instrument, such as the Big Five Inventory (BFI), to measure the five broad dimensions of personality: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (John & Srivastava, n.d.)

3. Section C: Section C included a form to retrieve academic performance in terms of grades, obtained, reflecting the participants' cumulative Grade Point Average (GPA) or recent examination scores.

The study utilised a self-administered questionnaire, both digital and physical, based on the Big Five personality framework. This model is widely supported in empirical research as a key predictor of academic performance.

Meta-analytic findings indicated that personality traits, particularly conscientiousness, are significant predictors of academic success (Poropat, 2009) Additional studies confirm the relationship between personality traits and learning outcomes across higher education contexts (Komarraju et al., 2011).

Academic performance will be measured using self-reported Grade Point Average (GPA). Research shows that self-reported GPA is a valid proxy for actual academic performance when anonymity is maintained (Kuncel et al., 2005).

Content validity was ensured through expert evaluation of the research instrument to confirm that it adequately measures the intended constructs. The instrument was carefully reviewed by academic experts in the field to assess its relevance, clarity, and adequacy in capturing the variables under study. In addition, the questionnaire was shared with fellow students to obtain feedback on clarity, wording, and overall understanding, which will help identify any ambiguous or confusing items. Continuous discussions were also held with the supervisor to guide the refinement of the instrument and ensure that it aligns with the study objectives. Based on the feedback obtained from experts, peers, and the supervisor, necessary adjustments were made before final data collection, This multi-step validation process ensured that the instrument is both accurate in measurement and appropriate for the study context. Ensuring validity is critical in

behavioural research, as it determines the accuracy of inferences drawn from the data (Richardson et al., 2012)

Reliability refers to the consistency of measurement across items. In this study, internal consistency reliability was assessed using Cronbach's alpha coefficient after pilot testing the research instrument. A pilot study was first conducted with a small group of respondents who are similar to the actual study population but not included in the final sample. Their responses were entered into statistical software to compute Cronbach's alpha for each scale in the questionnaire. A reliability value of 0.70 or higher was considered acceptable, indicating that the items within each construct are sufficiently consistent in measuring the same concept. Where the reliability coefficient falls below the acceptable threshold, items were revised or removed to improve consistency before the final data collection. Empirical research emphasized that reliable instruments are essential for producing stable and replicable findings in psychological studies (Poropat, 2009).

3.9 Data Processing and Analysis

Data was analysed using IBM SPSS Statistics, where SPSS stands for Statistical Package for the Social Sciences. Before analysis, the collected questionnaires were checked for completeness to ensure that all required sections have been properly filled in by respondents. Incomplete or inconsistent responses were identified and appropriately handled to maintain data quality. The data will then be coded by assigning numerical values to responses, especially for likert scale items, to facilitate statistical analysis. After coding, data entry was done into IBM SPSS, followed by data cleaning to check for errors, missing values, and inconsistencies. Preliminary analysis were then conducted using descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize the data. This was followed by inferential analysis to examine relationships between personality traits and academic performance in line with the study objectives.

Descriptive statistics (means, frequencies, and standard deviations) summarized the data. Inferential statistics included the following:

1. Pearson correlation analysis to examine relationships between personality traits and academic performance

2. Multiple regression analysis to assess the predictive power of personality traits

These statistical techniques are widely used in empirical research examining psychological predictors of academic outcomes (Poropat, 2009; Richardson et al., 2012)

3.10 Ethical Considerations

Ethical considerations are fundamental in research involving human participants because they ensure the protection of participants' rights, dignity, safety, and well-being while safeguarding the integrity and credibility of the research process (World Medical Association [WMA], 2013). This study will adhere to internationally recognized ethical principles outlined in the Declaration of Helsinki and the National Institutes of Health (NIH) guidelines for the protection of human research participants (NIH, 2018).

Prior to data collection, ethical approval was obtained from Makerere University and any other relevant authorities. Research involving human participants did not commence until ethical clearance had been granted by a recognized ethics review body (WMA, Declaration of Helsinki, 2013). Permission to conduct the study will also be sought from the relevant university offices and administrators.

Participation in the study was entirely voluntary. Potential respondents were provided with adequate information regarding the purpose, procedures, risks, and benefits of the study to enable them to make an informed decision about their participation (NIH, 2018). Written informed consent was obtained from all participants before data collection. Participants were also be informed of their right to decline participation or withdraw from the study at any time without penalty or negative consequences, in line with the principle of respect for persons (WMA, Declaration of Helsinki, 2013).

Confidentiality and anonymity will be strictly maintained throughout the research process. Participants will not be required to disclose identifying information such as names or registration numbers. Data collected will be coded and stored securely, and access will be restricted to the researcher and supervisor only. Protecting participants' privacy is a key ethical obligation in research involving human subjects (NIH, 2018; Officeof Extramural Research, n.d.).

The study posed minimal risk to participants because it involved the completion of questionnaires concerning personality traits and academic performance. Nevertheless, efforts were made to minimize any potential psychological discomfort. Participants were informed that they may choose not to answer any question that makes them uncomfortable and may discontinue participation at any stage of the study, ("World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects," 2013)).

The principle of beneficence guided the study by ensuring that the potential benefits outweigh any foreseeable risks (NIH, 2018). The findings contributed to a better understanding of the relationship between personality traits and academic performance among university students, thereby informing interventions aimed at improving academic outcomes. In addition, the principle of justice was upheld by ensuring fair and equitable selection of participants without discrimination based on gender, age, ethnicity, religion, or academic discipline (WMA, Declaration of Helsinki, 2013)

Furthermore, the researcher upheld the principles of honesty, transparency, and accountability throughout the research process. Data was collected, analyzed, and reported accurately without fabrication, falsification, or misrepresentation of findings. All sources of information used in the study were appropriately acknowledged to avoid plagiarism and maintain academic integrity (Richardson et al., 2012).

Overall, adherence to these ethical principles ensured the protection of participants and enhanced the quality, validity, and trustworthiness of the research findings

3.11 Encountered Problems And their Solutions

1. Low Response Rate. One of the challenges was low response rate from the selected respondents. University students often had demanding academic schedules, including lectures, coursework, examinations, and extracurricular activities, which limited their willingness or availability to participate in the study. A low response rate affected the representativeness and reliability of the findings.

Proposed Solution

The researcher clearly explained the purpose, significance, and potential benefits of the study to the respondents. Participants were assured that the information they provided was to be treated with strict confidentiality and used solely for academic purposes. In addition, questionnaires were administered at convenient times and locations to increase participation and improve the response rate.

2. Inaccurate or Socially Desirable Responses, Since the study focused on personality traits and academic performance, some respondents provided answers that portray them in a favorable manner rather than reflecting their true characteristics and experiences. This introduced response bias and affected the accuracy of the data collected.

Proposed Solution

To minimize this challenge, respondents were assured of anonymity and confidentiality. The researcher emphasized that there are no right or wrong answers and that honest responses are essential to the study's success. The use of a standardized personality inventory also helped improve the reliability of responses.

3. Difficulty in Accessing Accurate Academic Performance Information, Some students were not open to disclose their Grade Point Average (GPA) or academic performance records due to privacy concerns or fear of judgment.

Proposed Solution

The researcher assured participants that their academic information will remain confidential and will only be used for research purposes. Respondents who were uncomfortable providing exact

GPAs were allowed to indicate performance categories or GPA ranges, thereby increasing their willingness to participate.

4. Financial Constraints, The research process required financial resources for transportation, printing questionnaires, internet access, communication, and data analysis. Limited financial resources affected the efficiency of data collection and the overall implementation of the study.

Proposed Solution

A realistic budget was prepared at the beginning of the study to guide expenditure. The researcher utilised cost-effective methods such as electronic questionnaires and online communication platforms where feasible to minimize operational costs.

5. Limited Generalizability of Findings, The study was conducted among undergraduate students at Makerere University only. Consequently, the findings didn't fully represent the experiences and characteristics of students in other universities within Uganda or beyond.

Proposed Solution

The researcher acknowledged this limitation when interpreting the findings and recommended that future studies include participants from multiple universities and diverse educational settings to improve generalizability.

6. Measurement Challenges Associated with Personality Assessment

Personality traits are complex psychological constructs that are influenced by individual perceptions and situational factors. Consequently, self-reported measures did not capture personality characteristics with complete accuracy.

Proposed Solution

To address this challenge, the study employed a standardized questionnaire adapted from the Big Five Personality Inventory, which has been widely used and validated in personality research. In addition, validity and reliability tests were conducted to ensure the quality and consistency of the research instrument.

7. Participant Fatigue, Given that the questionnaire contained several items measuring different personality dimensions, some respondents became fatigued or lost interest before completing all sections of the instrument. This affected the quality of responses provided.

Proposed Solution

The researcher designed the questionnaire in a clear, concise, and user-friendly format. Respondents were informed in advance of the approximate time required to complete the questionnaire, and efforts were made to keep the survey as brief as possible while maintaining its validity and reliability

CHAPTER FOUR

RESULTS

Introduction

This chapter presents the findings of the study. It opens with the response rate and the demographic profile of the 379 respondents, proceeds to the descriptive statistics and reliability of the study variables, and then reports the inferential findings organised by specific objective: the traits dominant among high performers, the predictive contribution of the Big Five to academic performance, and the comparison of high and lower performers. Findings are presented through tables and figures and interpreted with reference to the empirical literature.

Response Rate

All 379 questionnaires distributed under the proportionate stratified plan were completed and returned in usable form, yielding a 100% effective response rate after data screening. This complete response was achieved through the combined administration of physical and online instruments, the assurance of anonymity, and administration at times convenient to respondents. A response rate of this magnitude substantially exceeds the 60% threshold generally regarded as adequate for survey research and effectively eliminates non-response bias as a threat to the validity of the findings.

Table 1, Number of responses in the analysis

NUMBER OF RESPONDENTS	FREQUENCY (n)	PERCENTAGE (%)
Number that responded	379	100
TOTAL	379	100

Demographic Characteristics of Respondents

The demographic composition of the sample is summarised in Table 4.1 and described further in other figures. The sample was broadly balanced by gender, with a slight male majority, and was concentrated in the traditional undergraduate age range, distributed across all four years of study, and drawn proportionately from the nine colleges and the school of law in accordance with the sampling design.

Table 2 Summary of Respondent Demographic Characteristics (N = 379)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	205	54.1
	Female	174	45.9
Age	18–21 years	174	45.9
	22–25 years	167	44.1
	26 years and above	38	10.0
Year of study	Year 1	91	24.0
	Year 2	102	26.9
	Year 3	106	28.0
	Year 4	80	21.1
Socio-economic status	Low	129	34.0
	Middle	197	52.0
	High	53	14.0

The gender distribution shows that 54.1% of respondents were male and 45.9% female, closely mirroring the broadly balanced gender composition of Makerere's undergraduate population and ensuring that the findings are not biased by gender. The near parity observed here compares favourably with earlier personality performance studies criticised for relying on predominantly female psychology samples (O'Connor & Paunonen, 2007).

The age profile indicated that majority of respondents (90.0%) fell within the 18–25 year range, consistent with a traditional undergraduate cohort, while 10.0% were aged 26 years and above, reflecting the presence of mature and returning students characteristic of Makerere's diverse intake.

Respondents were distributed across all years of study, with a modest concentration in the middle years. This spread ensures that the sample captures students at varying stages of academic socialisation, an important consideration given evidence that the salience of certain traits may shift across the progression of higher education (Chamorro-Premuzic & Furnham, 2003).

The proportionate stratified design produced the college distribution shown in Figure 2, in which each college is represented in proportion to its share of the undergraduate population. This proportionality is central to the study's capacity to examine trait performance associations across the full breadth of academic disciplines, addressing a limitation of discipline homogeneous prior research (Hartmann & Ertl, 2023).

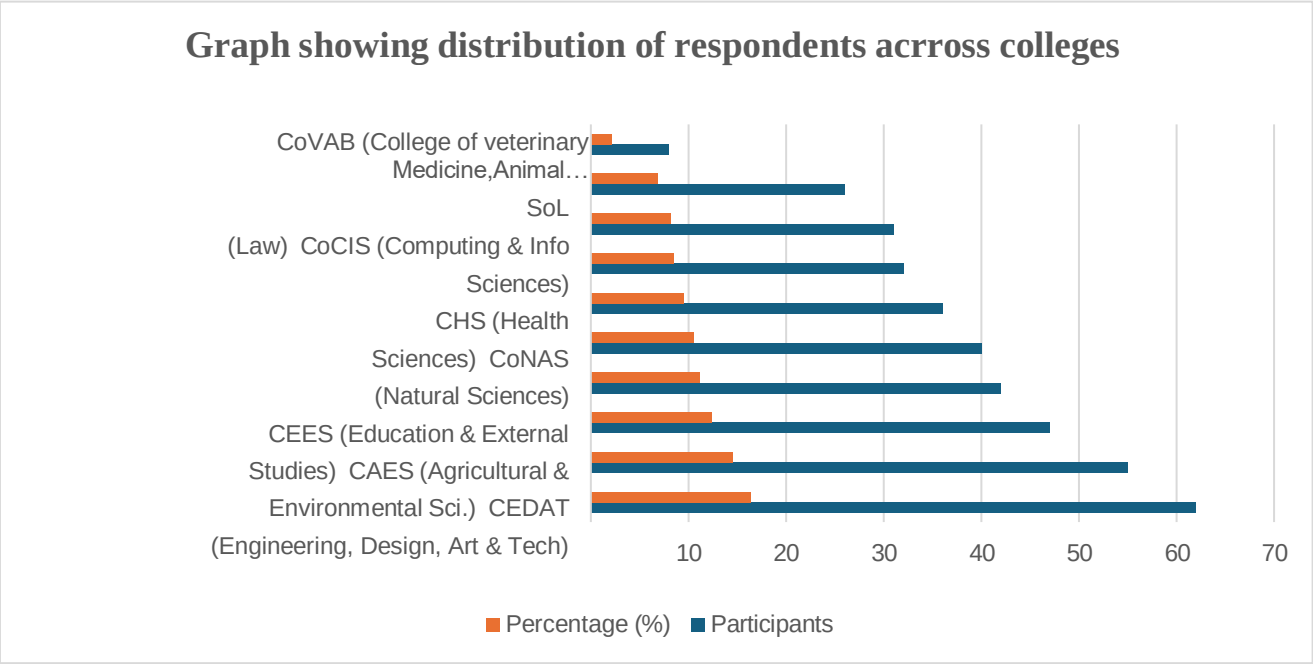


Figure 2 Distribution of Respondents Across Colleges

The socio-economic profile (Figure 3) shows a predominantly middle status sample (52.0%), with 34.0% reporting low and 14.0% high status, reflecting the socio-economic heterogeneity of the student body and providing variability against which the robustness of the personality performance relationship can be considered.

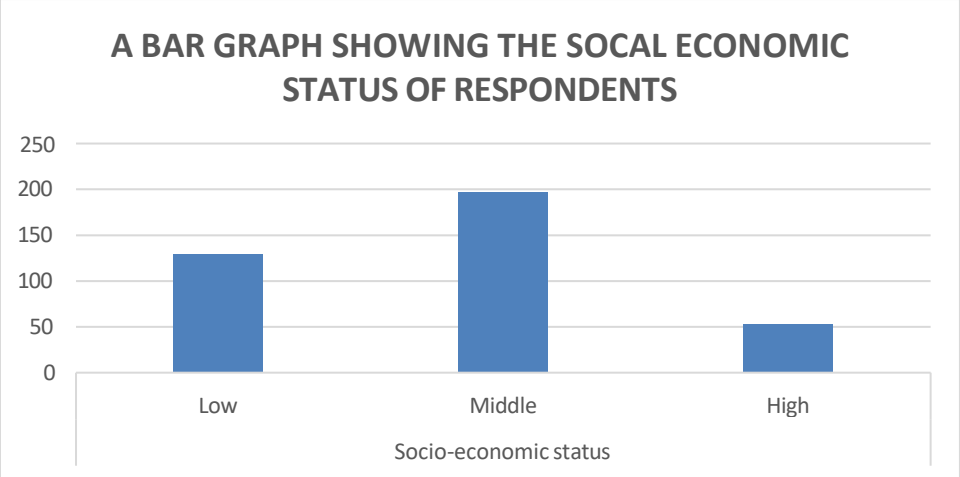


Figure 3: Socio-Economic Status of Respondents

Distribution of Academic Performance

Academic performance was assessed using respondents' CGPA, as shown in the table below. The CGPA scores in the dataset ranged from 2.00 to 5.00, with a mean of 3.58 (SD = 0.53).

Table 3: Distribution of Respondents by CGPA Category

CGPA category	Frequency (n)	Percentage (%)
Pass (2.00–2.79)	25	6.6
Second Lower (2.80–3.59)	173	45.6
Second Upper (3.60–4.39)	159	42.0
First Class (4.40–5.00)	22	5.8
Total	379	100.0

The results show that the largest proportion of respondents, 173 (45.6%), had CGPAs between 2.80 and 3.59, corresponding to the Second Lower category. This was followed by 159 (42.0%) respondents in the Second Upper category.

A total of 22 respondents (5.8%) were in the First Class category, while 25 (6.6%) were in the Pass category. For purposes of the study, respondents in the Second Upper and First Class categories were classified as high academic performers. Consequently, 181 respondents (47.8%) were classified as high academic performers, while 198 respondents (52.2%) had CGPAs below 3.60. The findings indicate that nearly half of the respondents, 47.8%, were classified as high academic performers. This provided a substantial group for examining the personality characteristics associated with relatively high academic achievement.

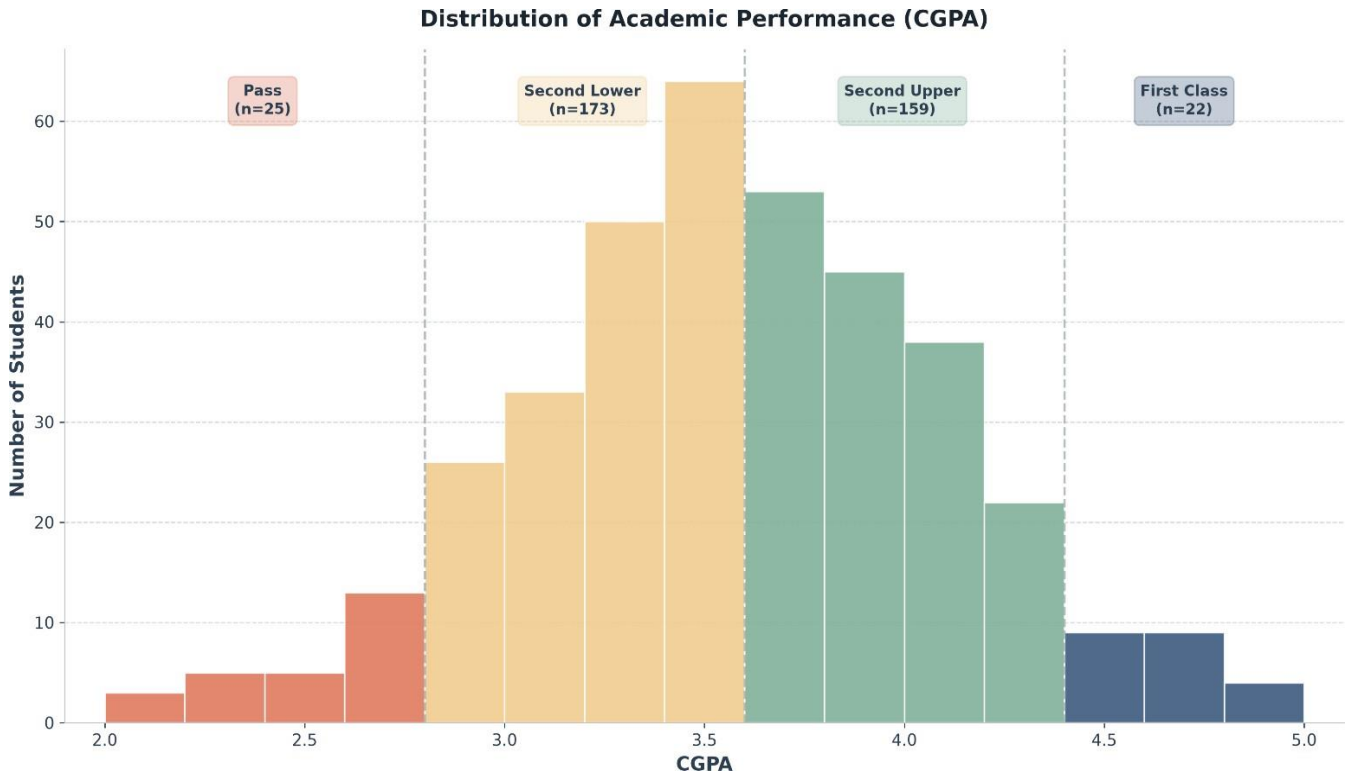


Figure 4 Distribution of Academic Performance (CGPA)

Descriptive Statistics and Reliability of Study Variables

Table 4 reports the descriptive statistics for the five personality traits and CGPA, obtained in the main sample. The findings indicate that agreeableness recorded the highest mean score (M = 3.75, SD = 0.52), followed by openness to experience (M = 3.72, SD = 0.54). Conscientiousness recorded a mean of 3.54 (SD = 0.58), while extraversion recorded a mean of 3.29 (SD = 0.68). Neuroticism recorded the lowest mean score (M = 2.98, SD = 0.71).

The results suggest that respondents generally demonstrated relatively high levels of agreeableness and openness to experience. In contrast, neuroticism had the lowest average score among the five personality dimensions.

The relatively larger standard deviation for neuroticism indicates greater variability in respondents' neuroticism scores compared with the other personality dimensions Respondents scored highest, on average, on agreeableness (M = 3.75) and openness (M = 3.72), and lowest on neuroticism

Table 4 Descriptive Statistics of the Big Five Personality Traits

Variable	M	SD
Conscientiousness	3.54	0.58
Openness	3.72	0.54
Extraversion	3.29	0.67
Agreeableness	3.75	0.52
Neuroticism	2.98	0.71
CGPA (Academic performance)	3.58	0.53

Correlation between Personality Traits and Academic Performance

Pearson Product-Moment Correlation analysis was conducted to establish the direction and strength of the relationships between the Big Five personality traits and academic performance as measured by CGPA.

Table 5: Pearson Correlation between Big Five Personality Traits and Academic Performance

Personality trait	Pearson correlation (r)	p-value	Decision
Conscientiousness	.353	< .001	Significant
Openness to experience	.179	< .001	Significant
Neuroticism	-.187	< .001	Significant
Extraversion	.061	.234	Not significant
Agreeableness	.091	.078	Not significant

Note: Dependent variable = CGPA. Statistical significance was assessed at $\alpha = .05$.

Conscientiousness and Academic Performance

The findings indicate a positive, moderate and statistically significant relationship between conscientiousness and academic performance ($r = .353$, $p < .001$). This means that students who scored higher on conscientiousness tended to have higher CGPAs. The positive relationship suggests that characteristics associated with conscientiousness, such as organization, responsibility, persistence, self-discipline and goal-directed behaviour, may be relevant to academic achievement.

Conscientiousness also recorded the strongest correlation with CGPA among the five personality traits examined. This suggests that conscientiousness may be particularly important in explaining differences in academic performance among the respondents.

Openness to Experience and Academic Performance

Openness to experience had a positive and statistically significant relationship with academic performance ($r = .179$, $p < .001$). Although the relationship was weaker than that observed for conscientiousness, the result indicates that students with higher openness to experience scores tended to have higher CGPAs.

This finding suggests that characteristics such as intellectual curiosity, willingness to consider new ideas, creativity and interest in learning may be associated with better academic performance.

Neuroticism and Academic Performance

The findings revealed a negative and statistically significant relationship between neuroticism and academic performance among university students at Makerere University. Pearson Product-Moment Correlation analysis showed that neuroticism was negatively correlated with students' CGPA ($r = -0.187$, $p < .001$). The negative correlation indicates that students with higher levels of neuroticism tended to have lower academic performance, while those with lower levels of neuroticism tended to report relatively higher CGPAs. However, the magnitude of the correlation ($r = -0.187$) indicates that the relationship was weak, suggesting that neuroticism alone does not strongly explain differences in students' academic performance.

Overall, the findings provide evidence that higher neuroticism is significantly associated with poorer academic performance among the students studied at Makerere University. The statistically significant negative association ($r = -0.187$, $p < .001$) and the significant negative regression coefficient ($\beta = -0.145$, $p = .004$) indicate that neuroticism is an important personality correlate of academic performance, although its effect is relatively modest compared with conscientiousness.

Extraversion and Academic Performance

The correlation between extraversion and academic performance was positive but very weak and statistically non-significant ($r = .061$, $p = .234$). This indicates that the study did not find sufficient statistical evidence of a meaningful linear relationship between extraversion and CGPA among the respondents.

Therefore, the level of extraversion reported by students did not appear to be significantly associated with their academic performance in this sample.

Agreeableness and Academic Performance

Agreeableness showed a weak positive relationship with academic performance ($r = .091$, $p = .078$). However, this relationship was not statistically significant at the 5% level. The findings therefore suggest that agreeableness was not a significant correlate of academic performance among the students included in the study.

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to determine the extent to which the five personality traits jointly predicted students' academic performance. CGPA was entered as the dependent variable, while conscientiousness, openness to experience, neuroticism, extraversion and agreeableness were entered as predictor variables.

Table 6: Regression Model Summary

R	R Square	Adjusted R Square	F	df	p-value
.410	.168	.157	15.05	5, 373	< .001

The results show that the regression model was statistically significant, $F (5, 373) = 15.05$, $p < .001$. The model produced an R^2 value of .168, indicating that the five personality traits jointly explained approximately 16.8% of the variation in students' CGPA.

The adjusted R^2 was .157, meaning that after adjusting for the number of predictors in the model, approximately 15.7% of the variation in academic performance was accounted for by the Big Five personality traits.

This finding demonstrates that personality is an important, although not exclusive, correlate of academic performance. The remaining variation may be attributable to other factors not examined in the model, including study habits, academic motivation, learning environment, socioeconomic circumstances, teaching and learning conditions, family factors and other individual characteristics.

Regression Coefficients

Table 7: Multiple Regression Analysis of Personality traits for the Prediction of Academic Performance

Predictor	B	Standardized β	t	p-value
Constant	2.536	—	8.144	< .001
Conscientiousness	.311	.338	6.800	< .001
Openness to experience	.159	.163	3.356	.001
Neuroticism	-.108	-.145	-2.921	.004
Extraversion	-.054	-.070	-1.363	.174
Agreeableness	-.038	-.038	-.742	.459

Table 8: Multiple Linear Regression Predicting Students' CGPA Controlling for Demographic Variables

Predictor	**B**	**Beta (β)**	**t**	**Sig. (p)**
Constant	2.411	—	7.413	< .001
Age 22–25	0.051	0.048	0.965	.335
Age 26+	−0.027	−0.015	−0.300	765
Female	0.055	0.052	1.090	.276
Year 2	0.046	0.037	0.628	531
Year 3	**0.146**	0.129	2.166	**.031**
Year 4	0.099	0.076	1.319	188
High SES	0.043	0.027	0.504	615
Middle SES	−0.012	−0.011	−0.205	.838
Conscientiousness (C)	**0.310**	**0.338**	**6.708**	**< .001**
Openness (O)	**0.165**	**0.170**	**3.452**	**< .001**
Neuroticism (N)	**−0.112**	**−0.151**	**−2.991**	**.003**
Extraversion (E)	−0.056	−0.072	−1.409	.160
Agreeableness (A)	−0.038	−0.037	−0.723	.470

Conscientiousness as a Predictor of Academic Performance

Conscientiousness emerged as the strongest significant predictor of academic performance in the regression model ($\beta = .338$, $p < .001$). The positive standardized beta coefficient indicates that higher conscientiousness was associated with higher predicted CGPA, after controlling for the effects of openness, neuroticism, extraversion and agreeableness.

This finding strengthens the Pearson correlation result and suggests that conscientiousness makes a unique contribution to explaining academic performance among the respondents.

Openness to Experience as a Predictor of Academic Performance

Openness to experience was also a statistically significant positive predictor of academic performance ($\beta = .170$, $p = .001$). This indicates that, after controlling for the other personality traits, higher openness to experience was associated with higher predicted CGPA.

However, its standardized beta coefficient was smaller than that of conscientiousness, suggesting that conscientiousness made a stronger unique contribution to academic performance in the regression model.

Neuroticism as a Predictor of Academic Performance

Neuroticism was a statistically significant negative predictor of academic performance ($\beta = -.151$, $p = .003$). The negative beta coefficient indicates that higher neuroticism was associated with lower predicted CGPA when the other personality traits were held constant.

The finding is consistent with the Pearson correlation analysis, which also demonstrated a significant negative association between neuroticism and CGPA.

Extraversion as a Predictor of Academic Performance

Extraversion did not significantly predict academic performance in the regression model ($\beta = -.072$, $p = .160$). Although the coefficient was negative in the regression model, the p-value was greater than .05. Consequently, there was insufficient statistical evidence to conclude that extraversion independently predicted academic performance among the respondents.

Agreeableness as a Predictor of Academic Performance

Agreeableness was also not a statistically significant predictor of academic performance ($\beta = -.037$, $p = .470$). The finding indicates that agreeableness did not make a statistically significant unique contribution to the prediction of CGPA after controlling for the other four personality traits.

Regression Equation

The results of the multiple regression analysis can be expressed using the following regression equation: CGPA = 2.411 + 0.051(Age 22–25) − 0.027(Age 26+) + 0.055(Female) + 0.046(Year 2) + 0.146(Year 3) + 0.099(Year 4) + 0.043(High SES) − 0.012(Middle SES) + 0.310(C) + 0.165(O) − 0.112(N) − 0.056(E) − 0.038(A)

Where:

- C = Conscientiousness
- O = Openness to experience
- N = Neuroticism
- E = Extraversion & A = Agreeableness

The regression equation indicates that CGPA (academic performance) is predicted by age, sex, year of study, socio-economic status (SES), and the big five personality traits. The constant of 2.411 represents the predicted CGPA for a student in all the reference categories, with the personality trait scores held at zero. The reference categories are age 18–21 years, male sex, Year 1 of study, and low SES. Compared with students aged 18–21 years, students aged 22–25 years are predicted to have a 0.051 higher CGPA, while students aged 26 years and above are predicted to have a 0.027 lower CGPA, holding all other variables constant. Female students are predicted to have a 0.055 higher CGPA than male students. Compared with Year 1 students, Year 2, Year 3, and Year 4 students are predicted to have CGPAs higher by 0.046, 0.146, and 0.099, respectively. Compared with students from low SES, students from high SES are predicted to have a 0.043 higher CGPA, whereas students from middle SES are predicted to have a 0.012 lower CGPA.

Regarding personality traits, conscientiousness (C) has the largest positive coefficient (B = 0.310), indicating that a one-unit increase in conscientiousness is associated with a 0.310-unit increase in predicted CGPA, holding other variables constant. Openness (O) also has a positive association with CGPA (B = 0.165). In contrast, neuroticism (N), extraversion (E), and agreeableness (A) have negative coefficients of −0.112, −0.056, and −0.038, respectively, indicating negative associations with predicted CGPA when the other variables are held constant.

Overall, the equation suggests that conscientiousness and openness are positively associated with academic performance, whereas neuroticism, extraversion, and agreeableness show negative associations. The demographic coefficients indicate differences in predicted CGPA across age, sex, year of study, and SES categories after controlling for the personality variables

Hypothesis Testing Results

H_1: There is a significant relationship between conscientiousness and students' academic performance.

The findings revealed a statistically significant positive relationship between conscientiousness and academic performance ($r = .353$, $p < .001$). The regression analysis also showed that conscientiousness was a significant positive predictor of CGPA ($\beta = .338$, $p < .001$). Therefore, the null hypothesis was rejected, and H_1 was supported.

H_2: There is a significant relationship between openness and students' academic performance.

The findings showed a statistically significant positive relationship between openness to experience and academic performance ($r = .179$, $p < .001$). Openness also significantly predicted CGPA ($\beta = .163$, $p = .001$). Therefore, the null hypothesis was rejected, and H_2 was supported.

H_3: There is a significant relationship between neuroticism and students' academic performance.
The findings indicated a statistically significant negative relationship between neuroticism and academic performance ($r = -.187$, $p < .001$). Neuroticism also significantly predicted academic performance negatively ($\beta = -.145$, $p = .004$). Therefore, the null hypothesis was rejected, and H_3 was supported.

H_4: There is a significant relationship between extraversion and students' academic performance.
The results showed that extraversion was not significantly associated with academic performance ($r = .061$, $p = .234$). It also did not significantly predict CGPA ($\beta = -.070$, $p = .174$). Since the p-value was greater than .05, the null hypothesis was not rejected, meaning H_4 was not supported.

H_5: There is a significant relationship between agreeableness and students' academic performance.
The findings showed a weak positive but statistically non-significant relationship between agreeableness and academic performance ($r = .091$, $p = .078$). Agreeableness also did not significantly predict academic performance ($\beta = -.038$, $p = .459$). Therefore, the null hypothesis was not rejected, and H_5 was not supported.

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CHAPTER FIVE

DISCUSSION

Introduction

This chapter presents the discussion, conclusion, recommendation and suggestions for future research based on the findings of the study on personality correlates of high academic performers among university students at Makerere University. The discussion interprets the findings in relation to the study objectives and previous empirical and theoretical literature concerning personality and academic performance. Particular attention is given to the five personality dimensions of the Five-Factor Model, namely conscientiousness, openness to experience, neuroticism, extraversion and agreeableness.

Discussion of Findings

Conscientiousness and Academic Performance

The findings established a statistically significant positive relationship between conscientiousness and academic performance among students at Makerere University, $r = .353$, $p < .001$. The regression analysis further indicated that conscientiousness was a significant positive predictor of academic performance, $\beta = .338$, $p < .001$. This finding implies that students with higher levels of conscientiousness tended to demonstrate better academic performance than those with lower levels of conscientiousness.

The finding can be explained by the characteristics associated with conscientiousness, including being organised, responsible, disciplined, achievement-oriented and persistent. These characteristics are particularly relevant in a university environment where students are expected to exercise considerable independence in managing their academic responsibilities. Conscientious students are more likely to plan their academic activities, complete assignments on time, attend to academic requirements and persist when faced with difficult academic tasks.

The finding is consistent with the Five-Factor Theory of personality, which identifies conscientiousness as a dimension involving characteristics such as competence, achievement

striving, dutifulness, self-discipline and deliberation (McCrae & Costa, 2008). Previous empirical evidence has also consistently identified conscientiousness as an important predictor of academic achievement. For example, O'Connor and Paunonen (2007) found that conscientiousness was significantly associated with post-secondary academic performance. Similarly, Poropat (2009), in a meta-analysis of the relationship between the Big Five personality traits and academic performance, found conscientiousness to be one of the most consistent personality predictors of academic achievement.

The findings are also consistent with Komarraju et al. (2009), who found that conscientiousness was positively associated with academic achievement and learning-related behaviours. The current finding therefore suggests that the ability of Makerere University students to regulate their behaviour, organise their academic activities and persist in academic tasks may be an important factor associated with higher academic performance.

Openness to Experience and Academic Performance

The study found a statistically significant positive relationship between openness to experience and academic performance, $r = .179$, $p < .001$. The regression analysis further showed that openness to experience was a significant positive predictor of academic performance, $\beta = .163$, $p = .001$. This suggests that students who demonstrated higher levels of openness to experience tended to have better academic performance.

Openness to experience is characterised by intellectual curiosity, imagination, creativity, receptiveness to new ideas and willingness to explore unfamiliar perspectives (McCrae & Costa, 2008). These characteristics may be particularly relevant within a university setting because higher education requires students to engage with diverse ideas, evaluate information critically, understand complex concepts and consider alternative perspectives.

The present finding is consistent with Komarraju et al. (2009), who reported that openness to experience was associated with learning-related outcomes and academic achievement. John et al. (2008) similarly describe openness as involving intellectual engagement, curiosity and receptiveness to new experiences. These characteristics may

encourage students to explore course materials beyond the minimum requirements and engage more deeply with academic knowledge.

However, the relationship between openness and academic performance in the present study was relatively modest compared with that of conscientiousness. This may indicate that intellectual curiosity alone may not be sufficient to achieve high academic performance. Rather, curiosity and intellectual engagement may be more beneficial when accompanied by disciplined study habits and persistence. Thus, the present findings suggest that openness contributes to academic performance, but conscientiousness appears to have a stronger predictive role within the current sample.

Neuroticism and Academic Performance

The findings revealed a statistically significant negative relationship between neuroticism and academic performance, $r = -.187$, $p < .001$. Neuroticism was also a significant negative predictor of academic performance in the regression analysis, $\beta = -.145$, $p = .004$. This indicates that students with higher levels of neuroticism tended to report lower academic performance.

Neuroticism reflects individual differences in emotional instability, anxiety, vulnerability to stress and the tendency to experience negative emotional states (McCrae & Costa, 2008). In a university environment, students who experience high levels of worry, anxiety and emotional instability may experience difficulties concentrating on academic tasks, preparing for examinations and maintaining consistent academic routines.

The negative association found in the present study is consistent with the theoretical conceptualisation of neuroticism within the Five-Factor Model. McCrae and Costa (2008) explain that individuals high in neuroticism tend to be more susceptible to psychological distress and negative emotional experiences. Such emotional tendencies may interfere with effective engagement in academic activities.

The finding also contributes to the broader literature demonstrating that emotional characteristics are relevant to academic functioning. O'Connor and Paunonen (2007) noted that personality traits can influence academic outcomes through behavioural and psychological

processes that affect students' engagement with academic tasks. The present finding therefore suggests that emotional stability may be relevant to understanding academic performance among Makerere University students.

Nevertheless, the result should be interpreted cautiously. Although the relationship between neuroticism and academic performance was statistically significant, the correlation was relatively small. Furthermore, because the study employed a cross-sectional design, the finding demonstrates an association rather than a causal relationship. It would therefore not be appropriate to conclude that neuroticism directly causes poor academic performance.

Extraversion and Academic Performance

The study found no statistically significant relationship between extraversion and academic performance, $r = .061$, $p = .234$. The regression analysis similarly indicated that extraversion was not a significant predictor of academic performance, $\beta = -.070$, $p = .174$. Since the p-value was greater than the conventional significance level of .05, the null hypothesis concerning the relationship between extraversion and academic performance was not rejected.

Extraversion is generally associated with sociability, assertiveness, enthusiasm and a preference for interpersonal interaction (John et al., 2008). Although these characteristics may facilitate social interaction and participation in group activities, they do not necessarily translate into improved academic performance. Academic achievement may depend more heavily on characteristics such as self-discipline, persistence and effective study behaviour.

The finding is therefore understandable within the context of university education, where academic success requires students to independently manage their learning. Being highly sociable or outgoing may provide social advantages, but such characteristics may not directly influence students' ability to complete academic tasks, prepare for examinations or meet academic deadlines.

The non-significant result also demonstrates the importance of examining personality dimensions individually rather than assuming that all Big Five traits contribute equally to academic achievement. Poropat (2009) similarly demonstrated that the association between

personality and academic performance differs across personality dimensions, with conscientiousness showing particularly consistent associations with achievement.

Agreeableness and Academic Performance

The study established that agreeableness was not significantly associated with academic performance, $r = .091$, $p = .078$. The regression analysis also showed that agreeableness was not a significant predictor of academic performance, $\beta = -.038$, $p = .459$. Since the p-value was greater than .05, there was insufficient statistical evidence to conclude that agreeableness significantly predicted academic performance among the students studied.

Agreeableness involves characteristics such as cooperation, trust, empathy, consideration and interpersonal harmony (John et al., 2008). Although these characteristics may support positive interpersonal relationships with peers and lecturers, they may not necessarily translate into higher academic achievement.

The finding suggests that academic performance may be more directly related to characteristics associated with self-regulation and intellectual engagement than to interpersonal characteristics. This interpretation is consistent with the broader personality literature, which suggests that the predictive value of personality traits depends partly on the specific outcome being examined (Poropat, 2009).

However, the non-significant finding should not be interpreted to mean that agreeableness has no value within the university environment. Rather, it indicates that agreeableness did not make a statistically significant contribution to academic performance within the current sample. The trait may still be relevant to other university outcomes, such as social adjustment, interpersonal relationships and collaborative learning.

Overall Contribution of Personality to Academic Performance

The multiple regression model indicated that the Big Five personality traits collectively explained approximately 16.8% of the variance in academic performance ($R^2 = .168$; adjusted R^2

= .157). This finding demonstrates that personality contributes meaningfully to differences in academic performance among the students studied.

The finding is consistent with the broader argument that academic performance is a complex outcome influenced by multiple psychological and environmental factors. Although personality is relevant, it does not operate in isolation. Other factors, including academic motivation, learning strategies, socioeconomic circumstances, teaching quality, family background, peer influence, previous academic preparation and learning environment, may also contribute to students' academic outcomes.

The findings therefore provide support for the Five-Factor Model as a useful framework for examining individual differences in academic performance (McCrae & Costa, 2008). In particular, the findings identify conscientiousness as the strongest positive personality predictor, followed by openness to experience, while neuroticism demonstrated a significant negative relationship. Extraversion and agreeableness did not significantly predict academic performance in the present study.

Recommendation

Based on the findings of this study, it is recommended that Makerere University strengthen existing academic support and student development programmes by incorporating approaches that promote self-regulation, effective time management, academic organisation, persistence and constructive coping with academic stress. Particular emphasis should be placed on behaviours associated with conscientiousness because it emerged as the strongest positive predictor of academic performance. Such programmes should be developmental rather than designed to label students according to personality types. The objective should be to equip students with practical academic and coping skills that can support effective engagement with university learning and potentially improve academic outcomes.

Suggestions for Future Research

Future research should consider longitudinal studies to examine how personality traits and academic performance develop and interact over time. The cross-sectional design used in the

present study provided information about associations between personality and academic performance at a particular point in time but could not establish temporal or causal relationships. Longitudinal research could therefore provide stronger evidence regarding whether personality characteristics precede changes in academic performance.

Future studies could also examine the contribution of other factors that may explain the remaining variance in academic performance. Since the Big Five personality traits explained 16.8% of the variance in academic performance, subsequent research could investigate variables such as academic motivation, study habits, self-efficacy, socioeconomic background, learning environment, academic stress and social support. Examining these variables alongside personality could provide a more comprehensive explanation of academic achievement among university students.

Further research should also consider comparative studies across different universities and academic disciplines in Uganda. The current study was conducted at Makerere University, and the findings may not necessarily generalise to students in other institutions or programmes. Studies involving students from public and private universities, as well as students from different academic disciplines, could determine whether the observed relationships between personality and academic performance remain consistent across different educational contexts.

Finally, future studies could employ larger and more diverse samples and consider alternative measures of academic performance, including semester GPA, cumulative GPA and objective academic records where ethically and practically feasible. Such approaches could strengthen the reliability and generalisability of findings concerning personality and academic achievement in Ugandan higher education.

Conclusion

The study concludes that personality is significantly associated with academic performance among university students at Makerere University, although the nature and magnitude of this association differ across the Big Five personality dimensions. Conscientiousness emerged as the strongest positive predictor of academic performance, indicating that disciplined, organised, responsible and persistent academic behaviours are

particularly important for students' academic achievement. Openness to experience was also positively associated with academic performance, suggesting that intellectual curiosity and receptiveness to new ideas may contribute to academic success. In contrast, neuroticism was negatively associated with academic performance, suggesting that emotional instability and vulnerability to stress may be associated with less favourable academic outcomes. Extraversion and agreeableness did not demonstrate statistically significant relationships with academic performance in the present study. Overall, the Big Five personality traits explained 16.8% of the variance in academic performance, demonstrating that personality makes a meaningful contribution to understanding academic outcomes, while also confirming that academic performance is influenced by several other factors beyond personality.

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APPENDICIES

APPENDIX A: QUESTIONAIRE

Dear Respondent,

I am conducting a study on the relationship between personality traits and academic performance among undergraduate students at Makerere University. You have been selected to participate in this study. The information you provide will be treated with strict confidentiality and will only be used for academic purposes.

Participation is voluntary, and you may withdraw from the study at any time without any consequences.

Please tick (✓) the response that best reflects your opinion.

SECTION A: DEMOGRAPHIC INFORMATION

1. GENDER: MALE ☐ FEMALE ☐

2. AGE : 18-21 years ☐ 22-25 years ☐ 26 years and above ☐

3. YEAR OF STUDY: YEAR 1 ☐ YEAR 2 ☐ YEAR 3 ☐ YEAR 4 ☐ OTHER ☐

4. COLLEGE/FACULTY: _____

5. SUBJECT STUDIED: _____

6. SOCIAL ECONOMIC STATUS: LOW ☐ MIDDLE ☐ HIGH ☐

SECTION B: BIG FIVE PERSONALITY INVENTORY

Please tick (✓) the response that best reflects your opinion.

INQUIRY	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1. Extraversion (E)					
Am the life of the party.					
Don't talk a lot.	1	2	3	4	5
Feel comfortable around people	1	2	3	4	5
Keep myself in the background.	1	2	3	4	5
Start conversations.	1	2	3	4	5
Have little to say.	1	2	3	4	5
Am quiet around strangers.	1	2	3	4	5
Don't mind being the centre of attention.	1	2	3	4	5
Don't like to draw attention to myself.	1	2	3	4	5
Talk to a lot of different people at parties.	1	2	3	4	5
2. Agreeableness (A)					
Feel little concern for others.	1	2	3	4	5
Am interested in people.	1	2	3	4	5
Insult people	1	2	3	4	5
Sympathize with others' feelings.	1	2	3	4	5
Am not interested in other people's problems.	1	2	3	4	5
I have a soft heart.	1	2	3	4	5
Am not interested in others..	1	2	3	4	5
Take out time for others.	1	2	3	4	5
Feel others' emotions.	1	2	3	4	5

Make people feel at ease	1	2	3	4	5
3. Conscientiousness (C)					
Am always prepared.	1	2	3	4	5
Leave my belongings around.	1	2	3	4	5
Make a mess of things	1	2	3	4	5
Pay attention to detail.	1	2	3	4	5
I finish my responsibilities on time	1	2	3	4	5
Often forget to put things back in their proper place	1	2	3	4	5
I like order	1	2	3	4	5
I sometimes avoid my responsibilities	1	2	3	4	5
Follow a schedule.	1	2	3	4	5
I am very careful in the work I do.	1	2	3	4	5
4. **Neuroticism (N)**					
Get stressed out easily.	1	2	3	4	5
Am relaxed most of the time	1	2	3	4	5
Worry about things	1	2	3	4	5
Change my mood a lot	1	2	3	4	5
Have frequent mood swings	1	2	3	4	5
I rarely feel sad or unhappy	1	2	3	4	5
Am easily disturbed.	1	2	3	4	5
Get upset easily.	1	2	3	4	5
Get irritated easily.	1	2	3	4	5
I usually feel calm, relaxed, and free from stress.	1	2	3	4	5
5. Openness to Experience (O)					
Have a rich vocabulary.	1	2	3	4	5
Have difficulty understanding abstract ideas	1	2	3	4	5

Have a vivid imagination	1	2	3	4	5
Am less interested in ideas that are difficult to visualize	1	2	3	4	5
I have excellent ideas.	1	2	3	4	5
Do not have a good imagination.	1	2	3	4	5
Am quick to understand things.	1	2	3	4	5
Use difficult words.	1	2	3	4	5
Spend time reflecting on things	1	2	3	4	5
Am full of ideas	1	2	3	4	5

SECTION C: ACADEMIC PERFORMANCE

INQUIRY	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
I consistently obtain high grades in my courses					
I am satisfied with my academic performance					
I perform better than most students in my class					
I meet most of my academic goals					
My CGPA reflects strong academic achievement					
My current CGPA	4.40 - 5.00	3.60 - 4.39	2.80 – 3.59	2.00 – 2.79	