



Influence of Students' Personality Traits on Academic Achievement Of Students Of Public Senior Secondary Schools In Rivers-East Senatorial District

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ABSTRACT

The study examined the influence of students' personality traits on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. The descriptive survey design was adopted. The population of the study consisted 9,787 SS2 students in public senior secondary schools in Rivers-East Senatorial District of Rivers State. The sample size of the study was 384 students. The sampling technique used was simple random sampling technique. The instrument tagged "Personality Trait on Academic Achievement of Students Questionnaire" was used for data collection. The reliability of the instrument was achieved using test-retest method and a reliability coefficient of 0.85 was obtained by means of the Pearson's Product Moment Correlation analysis. The instrument was validated by three Measurement and Evaluation experts. The research questions were answered using mean and standard deviation, while the z-test statistics was used in testing the null hypotheses at 0.05 level of significance. The findings of the study revealed that: openness, conscientiousness, extraversion, agreeableness have positive influence on academic achievement while neuroticism has negative influence on their achievement. The study recommended that, students should be enlightened on the various variables: openness, conscientiousness, extraversion, agreeableness and neuroticism on how they contribute to students' academic achievement; schools through the Senior Secondary School Board should organize awareness campaigns for students on the need to embrace openness and conscientiousness; students should develop the quality of agreeableness and extraversion which will make them acceptable to others and enhance their academic achievement.

Keywords: Academic achievement, agreeableness, conscientiousness, extraversion, openness, neuroticism, personality traits.

INTRODUCTION

Experts in pedagogy in various educational space have long focused on teaching and learning techniques to address the needs of individual learners. Students differ in their personal values or intellectual content, they receive and process information differently, understanding individual differences in academic achievement is critical to meeting the needs of today's diverse learners' challenges. Knowledge of the factors that influence academic achievement has significant implications for education and learning, in terms of tailoring teaching methods to individuals' learning styles and for curricula design. Attempts have been made by different intellectuals and Psychologists like Herbert J. Walberg and Jerald Greenberg to unravel the complexities surrounding learners' academic achievement. They have paid attention to extrinsic factors such as teaching techniques, types of school, school location, instructional resources,

study habits, teachers' certification and experiences, and so on (Prince, 2018). In a bid to overcome the unhappiness and deprivation which follow poor academic achievement for the learners, many parents spend lots of their financial resources to secure good schools for their children, and those parents who can afford it even invest on education abroad as they believe this will enhance the academic achievement of their children.

It is the desire of all parents that their children climb the ladder of academic ability as high as possible. This desire for high level of performance among students in secondary schools puts a lot of pressure on students, teachers, psychologists, and in general, the education system itself. Academic achievement is expressed by the dynamics of the pupil's relations with the system of school demands materialized in a congruent relation between demands and performances. The school curriculum and the learning tasks formulated by the teacher are comparison elements, a kind of reference standard in relation to which one determines the levels of academic achievement (high, medium or low) according to the size of the correlation between the demands and the pupil's performances (Golu & Golu, 2003). No doubt, excellence in academics demands high level of intelligence. But, in addition to intelligence, recent studies have indicated that personality can be a useful predictor of academic achievements (Busato, Prins, Elshout, & Hamaker, 2000; Chamorro-Premuzic & Furnham, 2003).

Personality is innate or inborn. It comes from within and it is the dynamic organization within the individual of those psychological systems that determine students' unique adjustment to their environment. The individual is organized and responsive to the environment. He shows some degree of consistency of a collection of behaviours. It is determined by hereditary factors, environmental factors, situation, physique and so on. A blend of personality characteristics is necessary for people to be successful in their career including academic performance. Researchers, educators and psychologists have been constantly searching for a set of variables that predicts pattern of students' behaviours and their relationship to academic achievement (Santrock, 2012). Personality has been recognized as a determining factor on how people learn. Wilt (2002) has found personality traits to be significantly related to school performance. College students tend to prefer learning environments consistent with their own personality type.

Personality is the sum total of the behaviour and mental characteristics that are distinctive of an individual (Colman, 2006). Personality is the whole or aggregate of psychological and behavioural features an individual possesses and such characteristics are unique to the living person. It is crucial to note that for a learner to gather the required knowledge and perform well academically, his personality is very essential to learning. Personality is also described as a categorized set of attributes that is found in a person that influences and defines the individual's cognition, motivation and behaviour. Larsen and Buss (2008) defined personality as psychological traits and mechanisms within an individual that are organized and relatively enduring and that influence his/her interactions with, and adaptations to the environment.

Furnham, Chamorro-Premuzic, and McDougall (2003) posited that there are other factors like personality traits, aside cognitive ability that account for the variation evident in learners' academic achievement. Personality structure or features have been studied in the psychological resources for several years due to their impact on several psychosocial outcomes of individual including academic achievement and motivation. The most widely studied personality characteristics are those in the Big Five Personality Model (Goldberg, 2000) which are openness to experience, conscientiousness, neuroticism, extraversion and agreeableness among other dimensions. Openness refers to being intellectually inquisitive and having a strong desire to have variety (Komarraju & Karau, 2005). A great number of studies (Busato, Prins, Elshout, & Hamaker, 2000; Busato, 2000; Chamorro-Premuzic & Furnham, 2003; Zhang, 2003) associated it with higher achievement. Openness to experience, however refers to appreciation for art, emotion, adventure, unusual ideas, curiosity and variety of experience. It reflects the degree of intellectual curiosity, creativity and a preference for novelty and variety a person has. It also can be described as the extent to which a person is imaginative or independent and depicts his personal preference for a variety of activities, including his school routine which has significant influence on his academic achievement.

Extraversion is another factor that exerts extremely strong and broad influence on learners' academic achievement. This is a broad trait and, like introversion, exists on a continuum of behaviour and attitudes. Extraverts are relatively outgoing, gregarious, sociable, and openly expressive. It is "characterized by sociability, spontaneity and adventurousness (Clark & Schroth 2010). It is important to understand that agreeableness is a personality trait manifesting itself in individual characteristics that are perceived as kind, sympathetic, cooperative, warm, and considerate. Every student that cooperates with the set standard and is considerate in his/her academic bidding excels in the long run.

Neuroticism is defined as "individual differences in one's disposition towards constructing, perceiving and feeling realities in threatening, disturbing or problematic ways" (Hakimiet *al.*, 2011). Due to its nature, neuroticism was negatively associated with academic achievement (Duff, Boyle, Dunleavy, & Ferguson, 2004; Laidra, Pullmann, & Allik, 2007; Lounsbury *et al.*, 2003a; Mathews & Zeidner, 2004). In line with the earlier studies, Furnham and Mosen (2009) opined that neuroticism and academic performance were negatively correlated due to the fact that the stress level that neurotic learners experienced was much higher than the facilitating level. It is good to understand that neuroticism factor, to a large extent, affects both the physical and psychological potentials of an individual.

Conscientiousness is the trait that is associated with diligence, self-discipline, punctuality, and general competence (McCrae & Costa, 2003). Conscientiousness is the personality dimension that correlates the strongest, out of all personality dimensions, with overall academic performance (Barrick *et al.*, 2001; Hurtz & Donovan, 2000). Steel (2007) found that conscientiousness has two attributes: sustained effort and goal-setting which contribute towards academic success. MacCann (2012) argued that conscientious students tend to have high scores.

Agreeableness measures the extent of a person's warmth and kindness. The more agreeable someone is, the more likely they are to be trustworthy, helpful and compassionate. Disagreeable people are cold and suspicious of others, and they are less likely to cooperate. Agreeableness encapsulates constructs of sympathy, cooperativeness, and helpfulness towards others. It is described as the degree to which a person is good natured, warm and co-operative as opposed to irritable, uncooperative, inflexible, unpleasant and disagreeable (Nofhle & Robins, 2007). Poropat (2014) believed that high agreeableness facilitates learning and therefore enhances academic performance of students. De Raad and Schouwenberg (2000) argued that agreeableness has positive effect on academic performance because it encourages team work. The relationship was later affirmed by Vermetten, *et al.*, (2001) who ascertained a positive relationship between agreeableness and academic performance.

From the forgoing analysis the researcher explored the influence of personality traits of openness, conscientiousness, extraversion, agreeableness, neuroticism on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Statement of the Problem

The opinion of the public concerning the standard of education in Nigeria has become obvious following the annual release of the senior secondary certificate examination (SSCE) results, which have always revealed poor results of students, especially in the core subjects English Language and Mathematics (Wallis, 2000). It has been observed that personality traits such as openness, conscientiousness, extraversion, agreeableness and neuroticism influence students' academic achievement positively or negatively. These problems had continued to persist and cannot be ignored. Students' performances do not conform with the expectations of the government and investments of parents. In order to decipher factors responsible for these and academic achievements, the intelligentsia, or experts and researchers have studied different factors at different instances that could be responsible for poor academic achievement (Schunk, 2012). Different intellectual giants have provided measures to help in defeating these various problems. Some of the studies revealed student's attitude towards school activities, school attendance, participation in instructional activities, interpersonal relationship with other learners and teacher and handling of instructional resources (Revelle, 2013). Personality features of students may also determine study habits, submission of assignment and preparation for examination. Hence, there is still a

lacuna in the knowledge of the influence of students' personality traits on academic achievement which led the researcher to carry out this study.

Purpose of the Study

The purpose of the study is to investigate the influence of students' personality traits on academic achievement in public senior secondary schools in Rivers-East Senatorial District of Rivers State. The specific objectives of the study are to:

1. Investigate the extent to which openness influences the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District.
2. Find out the extent of which conscientiousness influences the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State.
3. Determine the extent to which extraversion influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
4. Verify the extent to which agreeableness influences the academic Performance of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
5. Ascertain the extent to which neuroticism influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Research Questions

The study was guided by the following research questions:

1. To what extent does openness influence the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State?
2. To what extent does conscientiousness influence the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State?
3. To what extent does extraversion influence academic the achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State?
4. To what extent does agreeableness influence the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State?
5. To what extent does neuroticism influence the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State?

Hypotheses

The following null hypotheses which were tested at the 0.05 level of significance directed this study:

1. There is no significant difference in the mean rating of male and female students on the extent openness influences academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
2. There is no significant difference in the mean rating of male and female students on the extent conscientiousness influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
3. There is no significant difference in the mean rating of male and female students on extent extraversion trait influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
4. There is no significant difference in the mean rating of male and female students on the extent agreeableness influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.
5. There is no significant difference in the mean rating of male and female students on the extent neuroticism influences the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

METHODOLOGY

The descriptive survey design was adopted for the study. Descriptive research is a branch of research that presents or reports information or data the way it is (Obilor, 2018). Descriptive survey gives a clear picture of a situation. The population of the study comprised of 9,787 which consists all SS2 students of public senior secondary schools across all the 90 senior secondary schools in Obio/Akpor, Okrika, Omuma, Etche, Ogu/Bolo, Emuoha, Port Harcourt and Ikwerre Local Government Areas of Rivers State. (Source; Rivers State Senior Secondary Schools Board: Planning, Research and Statistics Departments 2020). The simple random sampling technique was adopted in selecting the three (3) Local Government Areas (Obio/Akpor, Port Harcourt and Ikwerre) in Rivers-East Senatorial District. The sample size of the study is 384 SS2 students fixed using the Taro Yamene formula. The instrument used for data collection was a researcher-developed structured questionnaire titled “Personality Trait on Academic Achievement of Students Questionnaire” which was used to assess the personality traits of students. The instrument which was validated by three experts in Measurement and Evaluation of Rivers State University has a reliability coefficient of 0.85 obtained by the test-retest method and the Pearson’s Product Moment Correlation analysis.

RESULTS

Research Question 1: *To what extent does openness influence the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State?*

Table 1: Descriptive Statistics on the Extent Openness Influences the Academic Achievement of Students of Public Senior Secondary Schools in Rivers-East Senatorial District

S/No	Items	Male Students (N=154)			Female Students (N=230)		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
1	My attention given to task based on scale of preference influence my academic achievement	2.57	0.80	High Extent	2.51	0.79	High Extent
2.	My level of wide variety of interest influences my academic achievement.	2.65	0.81	High Extent	2.62	0.81	High Extent
3.	My originality determines my level of influence on my academic achievement.	2.67	0.82	High Extent	2.55	0.80	High Extent
4.	My creative ability contributes to my level of academic achievement.	2.72	0.82	High Extent	2.65	0.81	High Extent
5,	Openness will help me to improve my academic achievement.	2.67	0.82	High Extent	2.55	0.80	High Extent
6.	My Open posture in school influence my academic achievement	2.72	0.82	High Extent	2.65	0.81	High Extent
	Grand Mean	2.65	0.81	High Extent	2.58	0.80	High Extent

Table 1 shows data on influence of openness on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. Male and female teachers’ responses for all the items (items 1 to 6) indicate mean scores lying between 2.50 and 3.49 ($2.50 \leq \bar{X} \leq 3.49$) and low standard deviation values ranging from 0.79 to 0.82 (close clusters about the means) indicating high extent influence of openness on students’ academic achievement. The grand means and standard

deviations are respectively 2.65 and 0.81 for male teachers and 2.58 and 0.80 for female teachers, which further highlight that openness influences students' academic achievement positively to a high extent. In other words, both male and female teachers agree that openness to experience influences, to a high extent, the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Research Question 2: *To what extent does conscientiousness influence the academic achievement of students in public senior secondary school in Rivers-East Senatorial District of Rivers State?*

Table 2: Descriptive Statistics on the Extent conscientiousness as a Personality Trait Influences Academic Achievement of Students of Public Senior Secondary Schools.

S/No	Items	Male Students (N = 154)			Female Students (N = 230)		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
7.	My being patient in relating to others influence my academic achievement.	2.77	0.78	High Extent	2.55	0.82	High Extent
8.	Engaging in my academic task carefully influence my academic achievement,	2.87	0.81	High Extent	2.65	0.81	High Extent
9.	The willingness to do my school work effectively influence my academic achievement	2.92	0.80	High Extent	2.59	0.80	High Extent
10..	Organization of my thought influence my academic achievement	2.90	0.77	High Extent	2.62	0.81	High Extent
11.	My ability to plan my daily activities before engaging influence my academic achievement.	2.92	0.79	High Extent	2.59	0.80	High Extent
12.	My daily discipline influences my academic achievement.	2.90	0.74	High Extent	2.62	0.81	High Extent
Grand Mean		2.67	0.76	High Extent	2.61	0.81	High Extent

The information in Table 2 shows the descriptive statistics on influence of conscientiousness on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. Male and female teachers' responses for all the items (items 7 to 12) indicate mean scores lying between 2.50 and 3.49 ($2.50 \leq \bar{X} \leq 3.49$) and low standard deviation values ranging from 0.76 to 0.81 (close clusters about the means) portraying high extent influence of conscientiousness on students' academic achievement. The grand means and standard deviations are respectively 2.65 and 0.81 for male teachers and 2.58 and 0.80 for female teachers, which further highlight that conscientiousness influences students' academic achievement positively to a high extent. Thus, both male and female teachers are in consensus that conscientiousness influences the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State to a high extent.

Research Question 3: *To what extent does extraversion influence the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State?*

Table 3: Descriptive Statistics on the extent Extraversion Influences the Academic Achievement of Students of Public Senior Secondary Schools

S/No	Items	Male Students (N = 154)			Female Students (N = 230)		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
13.	My adaptability to any condition I find myself influence my academic achievement.	2.65	0.81	High extent	2.62	0.84	High extent
14.	My ability to channel my energy to any social activity influence my academic achievement.	2.57	0.80	High extent	2.51	0.79	High extent
15.	My outward orientation influences my academic achievement.	2.72	0.82	High extent	2.65	0.84	High extent
16.	My interaction with others in any subject influences my academic achievement	2.67	0.83	High extent	2.55	0.82	High extent
17.	My sociability approach draws intellectual energy from others which in turn influence my academic achievement.	2.72	0.81	High extent	2.65	0.81	High extent
18.	My ability to relate to others stimulate my thinking and it influences my academic capacity.	2.67	0.82	High extent	2.55	0.83	High extent
Grand Mean		2.65	0.79	High Extent	2.58	0.82	High Extent

Table 3 shows data on influence of extraversion on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. Male and female teachers' responses for all the items (items 13 to 18) indicate mean scores lying between 2.50 and 3.49 ($2.50 \leq \bar{X} \leq 3.49$) and low standard deviation values ranging from 0.79 to 0.84 (close clusters about the means) indicating high extent influence of extraversion on students' academic achievement. The grand means and standard deviations are respectively 2.65 and 0.79 for male teachers and 2.58 and 0.82 for female teachers, which further highlight that extraversion influences students' academic achievement positively to a high extent. In other words, both male and female teachers agree that extraversion influences, to a high extent, the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Research question 4: *To what extent does agreeableness influence the academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State?*

Table 4: Descriptive Statistics on the extent Agreeableness Influences the Academic Performance of Students in Public Senior Secondary Schools.

S/No	Items	Male Students (N = 154)			Female Students (N = 230)		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
19.	My consistent approach in agreeing with others on subject that matters influence my academic achievement.	2.87	0.85	High Extent	2.59	0.80	High Extent
20.	My level of academic cooperation determines my cognitive strength which influence my academic achievement.	2.77	0.83	High Extent	2.55	0.80	High Extent
21.	My ability to perform my school task in harmony with curricula objectives influence my academic achievement.	2.90	0.85	High Extent	2.62	0.81	High Extent
22.	My level of tolerance influences my academic achievement.	2.92	0.85	High Extent	2.65	0.81	High Extent
23.	My level of carefulness influences my academic work.	2.90	0.85	High Extent	2.62	0.81	High Extent
24.	My desire to fulfil social obligations influence my academic achievement	2.92	0.85	High Extent	2.65	0.81	High Extent
Grand Mean		2.87	0.85	High Extent	2.60	0.81	High Extent

The information in Table 4 presents the descriptive statistics on influence of agreeableness on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. Male and female teachers' responses for all the items (items 19 to 24) indicate mean scores lying between 2.50 and 3.49 ($2.50 \leq \bar{X} \leq 3.49$) and low standard deviation values ranging from 0.76 to 0.81 (close clusters about the means) indicating high extent influence of agreeableness on students' academic achievement. The grand means and standard deviations are respectively 2.87 and 0.85 for male teachers and 2.60 and 0.81 for female teachers, which further show that agreeableness influences students' academic achievement positively to a high extent. Therefore, both male and female teachers are in accord that agreeableness influences the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State to a high extent.

Research question 5: *To what extent does neuroticism influence the academic achievement of students in public senior secondary school in Rivers-East Senatorial District of Rivers State?*

Table 5: Descriptive Statistics on the Extent Neuroticism Influences the Academic Achievement of Students in Public Senior Secondary Schools.

S/No	Items	Male Students (N = 154)			Female Students (N = 230)		
		\bar{X}	SD	Remarks	\bar{X}	SD	Remarks
25.	My moody and worrisome approach influence my academic achievement negatively.	2.95	0.86	High Extent	2.66	0.82	High Extent
26.	My anxious behaviour influences my academic achievement.	2.90	0.85	High Extent	0.82	0.79	High Extent
27.	My level of uncertainty influences my academic achievement.	2.92	0.85	High Extent	2.62	0.81	High Extent
28.	Sometimes I let small things get to my nerves too much and it influence my academic achievement negatively.	2.95	0.86	High Extent	2.72	0.82	High Extent
29.	My nervous expression in class affects my school work.	2.92	0.85	High Extent	2.62	0.81	High Extent
30.	My Neurotic behaviour is linked to poor academic performance and lower motivation	2.95	0.86	High Extent	2.72	0.82	High Extent
Grand Mean		2.93	0.86	High Extent	2.67	0.82	High Extent

Table 5 presents information on influence of neuroticism on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State. Male and female teachers' responses for all the items (items 13 to 18) indicate mean scores lying between 2.50 and 3.49 ($2.50 \leq \bar{X} \leq 3.49$) and low standard deviation values ranging from 0.79 to 0.84 (close clusters about the means) indicating negative high extent influence of neuroticism on students' academic achievement. The grand means and standard deviations are respectively 2.65 and 0.79 for male teachers and 2.58 and 0.82 for female teachers, which further highlight that neuroticism influences students' academic achievement negatively to a high extent. In other words, both male and female teachers agree that neuroticism influences, to a high negative extent, the academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Testing of Hypotheses

Hypotheses 1: There is no significant difference in the mean rating of male and female students on the extent openness influences academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Table 6: Z-test Analysis of Influence of Openness on Academic Achievement of Students of Public Senior Secondary Schools in Rivers-East Senatorial District.

Status	N	\bar{X}	SD	df	z-cal.	α	z-crit.	Decision
Male Students	154	2.58	0.80	382	1.29	0.05	1.96	H ₀ Not Rejected
Female Students	230	2.65	0.81					

Table 6 presents that female students have mean of 2.58 and standard deviation of 0.80, while male students have mean of 2.65 and standard deviation of 0.81. Both female and male students have degrees of freedom of 345, z-calculated of 1.29 and z-critical of 1.96 at $\alpha = 0.05$. This implies that the null hypothesis that “there is no significant difference in mean rating of male and female students on the extent of influence of openness on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State” is not rejected as z-cal. (1.29) < z-crit (1.96) at $\alpha = 0.05$. Therefore, female and male students of public senior secondary schools in Rivers-East Senatorial District are in agreement that openness influences students’ academic achievement to a high extent.

Hypothesis 2: There is no significant difference in the mean rating of male and female students on the extent conscientiousness influences academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Table 7: Z-test Analysis of influence of Conscientiousness Influences Academic Achievement of Students in Public Senior Secondary Schools in Rivers-East Senatorial District

Status	N	\bar{X}	SD	df	z-crit.	α	z-crit.	Decision
Male Students	154	2.67	0.76	382	1.24	0.05	1.96	H ₀ Not Rejected
Female Students	230	2.61	0.81					

Table 7 presents that female students have mean of 2.61 and standard deviation of 0.81, while male students have mean of 2.67 and standard deviation of 0.76. Both female and male students have degrees of freedom of 345, z-calculated of 1.24 and z-critical of 1.96 at $\alpha = 0.05$. This implies that the null hypothesis that “there is no significant difference in mean rating of male and female students on the extent of influence of conscientiousness on academic achievement of students of public senior secondary schools in Rivers-East senatorial District of Rivers State” is not rejected as z-cal. (1.24) < z-crit. (1.96) at $\alpha = 0.05$. Therefore, female and male students of public senior secondary schools in Rivers-East Senatorial District are in agreement that conscientiousness influences students’ academic achievement to a high extent.

Hypothesis 3: There is no significant difference in the mean rating of male and female students on the extent conscientiousness influences academic achievement of students in public senior secondary schools in Rivers-East Senatorial District.

Table 8: Z-test Analysis of Influence of Extraversion as a Personality Trait on Academic Achievement of Students in Public Senior Secondary Schools in Rivers State

Status	N	\bar{X}	SD	df	z-cal.	α	z-crit.	Decision
Male Students	154	2.65	0.79	382	1.29	0.05	1.96	H ₀ Not Rejected
Female Students	230	2.58	0.82					

Table 8 presents that female students have mean of 2.58 and standard deviation of 0.82, while male students have mean of 2.65 and standard deviation of 0.79. Both female and male students have degrees of freedom of 345, z-calculated of 1.29 and z-critical of 1.96 at $\alpha = 0.05$. This implies that the null hypothesis that “there is no significant difference in mean rating of male and female students on the extent of influence of extraversion on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State” is not rejected on z-cal. (1.29) < z-crit. (1.96) at $\alpha = 0.05$. Therefore, female and male students of public senior secondary schools in Rivers-East Senatorial District are in agreement that extraversion influences students’ academic achievement to a high extent.

Hypothesis 4: There is no significant difference in the mean rating of male and female students on the extent agreeableness influences academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State.

Table 9: Z-test Analysis of Influence of Agreeableness on Academic Achievement of Students of Public Senior Secondary Schools in Rivers-East Senatorial District

Status	N	\bar{X}	SD	df	z-cal.	α	z-crit.	Decision
Male Students	154	2.87	0.85	382	1.24	0.05	1.96	H ₀ Not Rejected
Female Students	230	2.60	0.81					

Table 9 presents that female students have mean of 2.60 and standard deviation of 0.81, while male students have mean of 2.87 and standard deviation of 0.85. Both female and male students have degrees of freedom of 345, z-calculated of 1.24 and z-critical of 1.96 at $\alpha = 0.05$. This implies that the null hypothesis that “there is no significant difference in mean rating of male and female students on the extent of influence of agreeableness on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State” is not rejected as z-cal. (1.24) < z-crit. (1.96) at $\alpha = 0.05$. Therefore, female and male students of public senior secondary schools in Rivers State are in agreement that agreeableness as a personality trait influences students’ academic achievement to a high extent.

Hypothesis 5: There is no significant difference in the mean rating of male and female students on the extent that neuroticism influences academic achievement of students in public senior secondary schools in Rivers State.

Table 10: Z-test Analysis of influence of Neuroticism on Academic Achievement of Students in Public Senior Secondary Schools in Rivers-East Senatorial District

Status	N	\bar{X}	SD	df	z-cal.	α	z-crit.	Decision
Male Students	154	2.93	0.86	382	2.29	0.05	1.96	H ₀ Rejected
Female Students	230	2.67	0.82					

Table 10 presents that female students have mean of 2.67 and standard deviation of 0.82, while male students have mean of 2.93 and standard deviation of 0.86. Both female and male students have degrees of freedom of 345, z-calculated of 2.29 and z-critical of 1.96 at $\alpha = 0.05$. This implies that the null hypothesis that “there is no significant difference in mean rating of male and female students on the extent of influence of neuroticism on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District in Rivers State” is rejected as z-cal. (2.29) > z-crit. (1.96) at $\alpha = 0.05$. Therefore, female and male students of public senior secondary schools in Rivers State are in agreement that neuroticism as a personality trait influences students’ academic achievement to a high extent.

DISCUSSION OF FINDINGS

Based on the analysis of the data, the findings of the study revealed that openness has a positive and significant influence on academic achievement of students in public senior secondary schools in Rivers State. This finding is in collaboration with Vedel (2016) who observed that positive association were found between openness and students' grades. And there is a positive link between openness to experience and broad intellectual skills and knowledge. Also, the hypothesis test in this study revealed that there exists significant influence of openness on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State

The study also indicated that conscientiousness influence academics achievements of students in public senior secondary schools in Rivers-East Senatorial District. This finding collaborates that of Marray *et al.*, (2014) who noted that conscientious people tend to be efficient and organized as opposed to easy-going, purposeful action, self-discipline and drive to achieve in their academics and that those high in conscientiousness are likely to value order, duty, achievement, and self, discipline and they consciously practice deliberation and work towards increased competence, However the null hypothesis was accepted and concluded that significant influence exists in the mean responses between conscientiousness and academic achievement of students in public senior secondary school in Rivers-East Senatorial District of Rivers State.

Further finding of this study showed that extraversion has positive influence on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State. This finding is in line with that of Poropat (2009) who asserted that those who score high in extroversion are likely to make friends and enjoy interacting with others, but they may want to pay extra attention to make well thought-out decisions, and needs and sensitivities of others at the expense of their studies. However, the hypothesis test revealed that there exists a significant influence of extraversion on academic achievement of students of public senior secondary schools in Rivers-East Senatorial District of Rivers State.

The study also revealed that agreeableness has positive and significant influence on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State. This finding is in line with the result by Lebowits (2016) who found that a positive association between agreeableness and academic achievement of students. He reported further that students high in agreeableness tend to be well-liked, respected and sensitive to the needs of others. They likely have few enemies and are affectionate to their friends and loved ones, as well as sympathetic to the plights of strangers.

Finally, the finding of the study indicated that neuroticism has a negative influence on academic achievement of students in public senior secondary schools in Rivers-East Senatorial District of Rivers State. This result agrees with that of Judge and Tlies (2020) who found that neuroticism is linked to poor academic performance and lower motivation, including motivation related to goal-setting and self-efficiency. Also, they observed that the anxiety and self-consciousness components of neuroticism are also positively linked to more traditional values and are negatively correlated with achievement values. So, hypothesis 5 is rejected and the conclusion is that there is no significant influence of neuroticism on academic achievement of students of public senior secondary school in Rivers-East Senatorial District of Rivers State.

CONCLUSION

The influence of students personality traits on academic achievement of students in public senior secondary schools cannot be overemphasized, However, the study concludes that personality traits have both positive and negative influence on the students' academic achievement in public senior secondary schools, hence openness to experience leads to gains in skills and knowledge, and it naturally increases as a person ages and has more experience to learn from, while neuroticism has been linked to poor academic performance or achievement and lower motivation, including motivation related to goal setting and self-efficacy, the study also deduced that conscientiousness, extroversion and agreeableness have

positive and significant influence on students' academic achievement in public senior secondary school in Rivers state.

RECOMMENDATIONS

From the findings and conclusion, the following recommendations are hereby put forward to ensure that this study achieves its objectives:

1. Government through the Senior Secondary School's Board should organize awareness campaigns for students on the need to embrace openness to experience, which has positive association with students' academic grade, performance and achievement.
2. Students should be trained by parents and teachers to be conscientious in everything they get involved in because conscientious people are efficient and organized which drive academic achievement.
3. School management should educate the students on how to use extroversion rather than introversion because extroversion influences students' academic achievement positively.
4. Students should be enlightened on the need to be agreeable in whatever they are doing hence agreeableness help the students to be well-liked, respected and sensitive to the needs of others.
5. School management should discourage their students from neuroticism hence it has been linked to poor academic achievement and lower motivation among the students.

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