Personality Types and Academic Achievement of Students in Obio-Akpor Local Government Area of Rivers State

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Abstract

The study investigated the Personality types and academic achievement of students in Obio/Akpor Local Government Area of Rivers State. Two research questions and two corresponding null hypotheses guided this study. The study adopted the correlational research design. 300 secondary school students were used for the study and were drawn through a combination of simple random sampling technique and stratified random sampling technique. Type A and B personalities are the independent variables while academic achievement are the dependent variables of this study. The instrument used for the study is the Personality Type Assessment Scale (PTAS,) and student scores for their last term examination was used as their achievement score. The data collected were analyzed with simple regressions as statistical tool. The results obtained indicated that the type A and type B personalities do not statistically predict academic achievement. Based on the findings, it was recommended among others that Similar studies should be conducted using volunteer and non volunteer participants. This would remove the extraneous variable that volunteer participants may have similar personality traits or learning styles thereby reducing the potential of skewing the sample population

Keywords: Personality, Type A personality, Type B personality, Academic Achievement.

Introduction

Finding methods through which students can learn in the most productive and time-saving manner possible has traditionally been one of the primary focuses of educational research and development. In the past, it was hypothesised that student performance was influenced by both variations in academic success and individual characteristics (Ariani,, 2013). According to the United States Department of Education (2002), for many years, educators have benefited from

making conclusions regarding these distinctions in order to produce resources and teaching techniques that are compatible with the tendencies of their students.

Concern has been expressed on a global scale regarding the academic achievement of students (Furnham et al 2013). It is generally accepted, both on a global scale and in Nigeria in particular, that enhancing the quality of education and increasing investments in educational and human resources are effective components that can pave the way for a country's all-encompassing growth. The enhancement of the overall academic performance of students is also one of the fundamental objectives of educational planning. Students are able to completely express their talents and capabilities in a manner that is congruent with the goals of their education when they demonstrate strong academic achievement. Notably, academic achievement is regarded as one of the essential factors in determining the quality of an education. As a result, there is little question that academic performance is a serious issue that is currently being faced by students, teachers, parents, school officials, and the community as a whole. A number of different approaches have been taken by researchers in an effort to understand the intricacies surrounding academic success (Ackerman, et al 2017). For instance, scholars in the field of psychology have proposed a multitude of explanations for why there are differences in levels of accomplishment among young people (Ackerman, et al 2017). According to the findings of these researchers, a significant amount of focus has been placed on extrinsic factors such as the type of school, the teaching techniques, the location of the school, the instructional materials, the quality of the lecturers, and their experience.

A person's ability to adapt to their environment is reflected in the relatively consistent and unique patterns of thought, conduct, and emotional responses that make up their personality. Personality is described as a person's ability to adapt to their surroundings (Jung, 1971; Myers, 1980).

Individuals are distinguished from one another by their unique mental and behavioural traits, which are collectively referred to as their personalities (McAbee, & Oswald, 2013). It is a term that denotes to the distinct and consistent patterns of behaviour, ideas, and feelings that are exhibited by individuals (Baron, 2006). The nature of individuals is not the only thing that varies; people's personalities do as well. This is a law of nature, and it is important to remember that. The nature of individuals also has a significant impact on whether or not a person's life is successful or unsuccessful, and this includes the lives of students.

According to Schacter, Gilbert, and Wegner (2009), an individual's personality can be defined as their own way of acting, thinking, and feeling that originates from within the individual and remains reasonably consistent throughout their life. On the other hand, personality type refers to the psychological classifications of different types of individuals. Personality types are sometimes differentiated from personality traits, with the latter embodying a smaller grouping of behavioural tendencies. Personality types are sometimes distinguished from personality traits (Schacter et al, 2009). A person's personality type can also be defined as a group of behaviours that are thought to occur together consistently, in particular as determined by a certain pattern of responses to a personality inventory. Another way to think about personality types is as a collection of traits that are thought to be inherited.

People who are classified as introverts and those who are classified as extraverts, for instance, are said to belong to two fundamentally distinct kinds of individuals, according to type theories. In addition, due of the way people's personalities are, the results of personality tests typically fall on a bell curve rather than in discrete groups (Deraad, 2000). In the 1950s, cardiologists Myer Friedman and Ray Rosenman created a categorization of personality types that divides people into two categories: type A personality and type B personality. This classification is one of the other personality type classifications.

The way in which individuals react to pressure is referred to as type A personality. People that fall under the Type A personality category are typically exceedingly competitive and self-critical. They work hard to achieve their objectives, yet they take little satisfaction in the work they put in or the results they achieve. The existence of a large life imbalance is connected to and exacerbated by this fact. This is distinguished by a significant amount of work involvement. People that fall under the Type A category are quickly agitated and have a propensity to overreact. They also frequently suffer from hypertension, generally known as high blood pressure (Bates, 2006). People with Type A personalities have a persistent feeling of immediacy and appear to be engaged in a never-ending battle against the passage of time. They frequently become easily irritated when delays and useless time schedule commitments are packed too tightly, and as a result, they frequently attempt to accomplish more than one thing at the same time, such as reading while eating or watching television. Again, they have a propensity to be easily provoked to rage or animosity, which they could or might not exhibit openly depending on the situation. It indicates that this is the primary risk factor associated with heart disease.

Personalities with a Type B disposition are typically calm, laid-back, and laid-back, and they occasionally lack an overwhelming sense of urgency. Individuals with type A personalities and those with other personality types frequently describe people with type B personalities as pitiful and uninterested. This is because of the characteristics listed above (Myers 1997). People who fall into the Type B category are unruffled and have a laid-back demeanour. They enjoy having a good time and are not as cutthroat as other people. They are also better able to relax without having negative thoughts about themselves, and they are able to work without becoming anxious or agitated. They have a low stress threshold and a laid-back demeanour. Even while type Bs have the potential to be achievers as well, their level of competition will never match that of type As. They are able to put off the work till the very last minute and then finish it. Some of them are capable of becoming procrastinators, which is something that type A personalities are incapable of doing.

Given the significance of personality to human behaviour, a number of studies have been conducted to investigate the ways in which one aspect of personality can impact an individual's actions. For example, Odnko and Adeyerno (1997) conducted a study on the influence of personality and academic performance among secondary school students in two local government areas of Niger state. They discovered that an introvert personality has a negative

impact on academic performance, which results in students having low grades at the end of their programme. This was the conclusion of their research.

Examinations and ongoing assessments are the most common methods for measuring academic performance; however, there is no widespread consensus regarding the most appropriate method of evaluation or regarding which aspects of academic success are of the utmost significance: procedural knowledge, such as skills, or declarative knowledge, such as facts (Bhagat 2013). When building models of school performance, it is necessary to take into account aspects such as exam anxiety, environment, motivation, and emotions. Furthermore, there are conflicting data regarding which individual characteristics accurately predict academic performance (Mosche, 1998). However, there is evidence that links individual disparities in academic achievement to differences in both IQ and personality (Sophie, Benedikt, & Tomas 2011). Students who have a better mental ability, as shown by their IQ test scores, as well as students who have a higher level of conscientiousness (which is linked to effort and achievement motivation), have a tendency to accomplish highly in academic settings. In addition to IQ and work ethic, a recent meta-analysis found that one of the most important factors in determining academic success is one's level of mental curiosity, which was determined by one's level of usual intellectual engagement (Sophie, Benedikt, & Tomas 2011). The amount to which a person's individual talents can influence either their academic success or their learning performance is referred to as cognitive variables or learning factors. A number of cognitive skills, such as attention, memory, and reasoning, are included in these components. Students in their first year of college who have a solid academic performance typically have developed learning beliefs and a strong knowledge integration (Brenda Ann Marie 2014). According to the findings of other pieces of research, kids who have greater levels of academic performance, motivation, and persistence are more likely to have intrinsic goals than extrinsic ones (Leslie & Ingrid 2013). Students who are motivated to improve upon their past or upcoming performance have a tendency to perform better academically than their classmates who are less motivated to improve upon their performance (Barry, & Rhonda 2011). To put it another way, pupils who have a larger need for achievement have a better level of academic performance.

The degree to which a student has met either their immediate or their long-term educational objectives is referred to as their academic performance (Ward, Stoker, & Murray-Ward 1996). Academic achievement is measured by the cumulative grade point average as well as the completion of educational degrees such as high school and bachelor's degrees.

Research has shown that in addition to cognitive elements, such as intelligence, excellent academic achievement can also be attributed to non-cognitive factors like personality, as was mentioned earlier. Research into the relationship between academic performance and personality has become increasingly important in recent years. According to the findings of some experts, the characteristics of a student's personality are yet another important aspect that is believed to be responsible for the academic achievement of pupils. There is some evidence that personality intricately tied with individual differences in learning styles, and it is recommended that

educators go beyond the current emphasis on cognition and include this variables (type A and type B personalities) in understanding academic behaviour (Komarraju, Karau, Schmeck, & Alen 2011).

Statement of the Problem

It is possible that the influence of individual cognitive variations can help to explain the characteristics of the student who is most likely to succeed in a given educational environment. There is a paucity of information regarding the individual disparities among Obio/Akpor students who are enrolled in secondary schools. Finding methods by which students can learn in the most productive and time-saving manner possible has been one of the primary focuses of educational research and development. The importance of an individual's unique characteristics in determining academic performance is growing. The lack of research on personality type and students' achievements in educational fields is not typical in Rivers State, and specifically in Obio/Akpor, which is what has inspired the examination into these studies.

Research Questions

The following research questions was designed to guide the study:

1. To what extent is type A personality related to the academic achievement of secondary students in Obio/Akpor?
2. To what extent is type B personality related to the academic achievement of secondary students in Obio/Akpor.

Hypotheses

The following hypotheses were tested at 0.05 alpha levels

Ho1: Type A personality is not significantly related to the academic achievement of secondary students in Obio/Akpor.

Ho2: Type B personality is not significantly related to the academic achievement of secondary students in Obio/Akpor.

Psychological Type Theory

Carl Jung, a Swiss psychologist, proposed early concepts of personality characteristic theory. His theory of psychological kinds was founded on the assumption that seemingly random behaviour is not truly random, but rather follows a pattern (Dewar & Whittington, 2000; Jung, 1971; Myers, 1962). Jung proposed that this pattern reflects a person's proclivity for gathering

information (perception) and making decisions (judgment). These two processes were considered auxiliary functions and are detailed in further detail below.

To achieve psychological symmetry, dominating functions or processes are coupled with auxiliary processes to produce a balanced personality (Jung, 1933, 1971; Myers, 1980). Dominant functions explain how people mirror the world in which they are most at ease (Myers): the outside world of action (extraversion) or the inner world of ideas (introversion) (introversion). "This conduct, Jung contends, is innate, just as being right or left-handed is" (Dewar & Whittington, 2000).

Jung (1933) describes the two general attitudes indicated above, introversion and extraversion, as complementing attitudes or orientations toward life. According to Jung, everyone is capable of being both introverted and extraverted, despite the fact that these are diametrically opposed characteristics. This assumption is based on the concept that "when people develop into maturity, one of the attitudes becomes dominant, so that the person is either introverted or extraverted" (Maddi, 1989, pp. 310).

Jung (1933) felt that everyone employs four essential mental processes: (a) sensing, (b) intuition, (c) reasoning, and (d) emotion. According to his idea, any cognizant mental action can be classified as one of these four functions (Jung). Furthermore, an individual's personality is defined by the dominance of one of these functions over the others. He also stated that each individual uses his dominant function in either an extraverted or introverted manner. Jung's personality theory was divided into eight typological groupings. Personality type theory has been established in psychological and educational literature for nearly 40 years (Hogan, 2018). However, there is limited agreement on how personality factors affect instructional techniques and learning.

Personality Type and Performance

The significance of an individual's personality type in relation to their performance varies according to the findings of different research investigations. Numerous research were carried out by Lengnick-Hall and Sanders (2007) that matched personality type to performance and found substantial relationships between the two. The research that Lengnick-Hall and Sanders had done was supplemented by Westerman et al. (2012), who looked at the links between personality type, learning environment, and performance. They discovered that personality continued to be a strong predictor of student performance, particularly in relation to the introversion component (Westerman et al.). The Myers-Briggs Type Indicator (MBTI), on the other hand, was not used in either of these studies to measure personality, nor were the results of the performance analyses detailed in detail.

The idea that one's personality type can influence performance has been supported by several studies. Wheeler (2011) did a literature review on a total of sixteen papers that were particularly relevant to accounting classes. The Myers-Briggs Type Indicator (MBTI) was used to make personality assessments in each of the research that were looked at, and course grades were used in seven of the investigations. In each of the seven experiments, there was a substantial correlation between the participant's personality type and their performance. On the sensing-intuitive scale, the correlations that were found to be most significant were. Based on these

findings, it would appear that there are aspects of personality type that may be relevant to the process of individualising the design of educational programmes.

Studies of type impacts in engineering education have reportedly been carried out by a collaboration of eight universities and the Center for Applications of Psychological Type, as stated by Felder, Felder, and Dietz (2002). In every one of these investigations, people who are more introverted, intuitors, thinkers, and judges had a better overall performance than their extraverted, feeling, perceiving, and sensing counterparts.

It is not obvious how the measures of performance were derived; however, these results undoubtedly provide weight to the hypothesis that personality type may play a role in determining performance. The relationship between personality type and performance factors like cumulative grade point averages over the course of years has been investigated in a number of studies. Rosati (2009) found that there were disparities in personality types among students who were performing at lower academic levels, but he found no differences in personality types among students who were performing at higher academic levels (as cited in Felder et al., 2002). In their research on the admittance indices and grade point averages of first-year engineering students, Felder et al. came to the same conclusions. Even though the differences between the groups were not statistically significant, introverts had higher grade point averages and a higher admissions index than extroverts did among the stronger students.

There have also been studies done on the overall student population of colleges that look at different personality types and how well they predict success. A study by Kahn, Nauta, Gailbreath, Tipps, and Chartrand (2012) was carried out with the participation of 677 first-year college students who were engaged in orientation classes. Their findings uniquely predicted grade point average as well as freshman-to-sophomore persistence using the Myers-Briggs Type Indicator (MBTI) as well as numerous other personality evaluation instruments. McCaulley (1990) found that the difference between sensing and intuitive preferences was the most significant preference when reviewing studies on the impact of type on education. According to Myers and colleagues' (1998) research, a choice for intuition, which entails seeing patterns and connections in information, is associated with greater performance on standardised exams compared to a preference for sense, which suggests a concentration on particulars. Myers and McCaulley's findings that intuitors consistently outperformed sensors in college engineering courses are supported by Rosati (2009) and Felder et al. (2002). This confirms the possibility that personality type and performance may be of particular interest in the course design and instruction. Intuitor students outperformed sensor students in every single course.

The findings of these investigations point to the possibility that personality type has an effect on performance. The majority of these studies looked at performance by comparing preferences to a variety of assessment criteria. In several instances, correlations were established, but the details of particular outcomes were not presented. For the purpose of this investigation, performance will be evaluated based on the average number of tests taken over the course of a semester that is 16 weeks long. The concept that a person's personality type can have an effect on their performance means, among other things, that persons who exhibit particular personality types

may be better able to learn efficiently through the use of diverse learning settings, such as remote education.

Methodology

The study adopted correlational research design. The population of the study consisted of all senior secondary school students in public secondary schools in Obio/Akpor Local Government Area of Rivers State. The number of students as at the time of this investigation were 5,331 senior students in Obio-Akpor Local Government Area. A combination of simple random sampling technique and non-proportionate stratified random sampling technique was used to draw a sample of 300 senior secondary students of mixed levels (SSI, SSII, and SSIII) from six schools with each contributing 50 students. The instruments used for this study. was the Personality Type Assessment Scale (PTAS) which was correlated with their exam scores. The PTAS was made up of two sections A and B with each of the sections having 10 items. The response format for the PTAS was the 4 point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The validation of the instruments revealed that the reliability coefficients through Cronbach Alpha of 0.67. The instrument were administered directly by the researchers and the data collected were subjected to mean, standard deviation, multiple regression and analysis of variance.

Results

Research Question 1: To what extent is type A personality related to the academic achievement of secondary students in Obio/Akpor?

Table 1: Simple Regression analysis of type A personality related to the academic achievement of secondary students

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.068[a]	.005	.001	4.51476

a. Predictors: (Constant), TYPE A PERSONALITY

Table 1 showed that read and write learning style has low positive relationship with secondary students' academic achievement at R = .068. The R-square value of .005, implies that the predictor had 0.5% variation academic achievement was accounted for by type A personality and 0.95% was accounted for by other factors.

Research Question 2: To what extent is type B personality related to the academic achievement of secondary students in Obio/Akpor.

Table 2: Simple Regression analysis of type B personality related to the academic achievement of secondary students in Obio/Akpor

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.001[a]	.000	-.003	4.52523

a. Predictors: (Constant), TYPE B PERSONALITY

Table 2 revealed a simple correlation output of R = .001 which indicated that there is a very low positive linear relationship between type B personality and academic achievement of secondary students in Obio/Akpor. The R^2 value of .000 showed that no percentage variation in academic achievement of students was accounted for by type B personality.

Ho1: Type A personality is not significantly related to the academic achievement of secondary students in Obio/Akpor.

Table 3: Simple regression analysis of type A personality and secondary students' academic achievement

ANOVA

Model 1	SS	df	MS	F	Sig.	Remark
Regression	29.754	1	29.754	1.470	.226[b]	Ho1 Accepted
Residual	6010.975	297	20.239			
Total	6040.729	298				

Model	Unstandardized Coefficients		Standardized Coefficients	T		Sig.
1	Beta (β)	Std. Error	Beta (β)			
(Constant)	12.722	1.921		6.622		.000

type	A	.193		.070	1.212		.226
personality		.077					

a. Dependent Variable: ACHIEVEMENT TEST

Table 3 shows the F-ratio (1.470), p>0.05. the Beta weight for type A personality variable was 0.070, t= 1.212. The beta value shows that type A personality alone contributes 0.7% to the variation in secondary students academic achievement. Since the regression analysis show F-ratio (1.470), the null hypothesis 1 that type A personality is not significantly related to academic achievement of secondary students in Obio/Akpor is accepted.

Ho2: Type B personality is not significantly related to the academic achievement of secondary students in Obio/Akpor.

Table 4: Simple regression analysis of type B personality and secondary student academic achievement

ANOVA						
Model 1	SS	Df	MS	F	Sig.	Remark
Regression	.003	1	.003	.000	.990[b]	Ho 1 Accepted
Residual	6081.876	297	20.478			
Total	6081.880	298				

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
1	Beta (β)	Std. Error	Beta (β)			
(Constant)	14.985	2.860		5.239	.000	
type B personality	.001	.096	.001	.012	.990	

a. Dependent Variable: ACHIEVEMENT TEST

The significant "constant t-value (14.985) showed that there are some other potent variables which were not included in the study. The Beta weight for type B personality was found not significant, Beta = .001, t = .012, p>.05. The regression equation for model 1 is Y^1 = 14.985 + .001 X_1 where X_1 is the score on type B personality and Y^1 = is the predicted secondary students' academic achievement score. This indicates that at every unit increase in type B

personality, the students' academic achievement score is increased by .001. Whereas, at zero unit of X_1 the criterion (Y^1) = 14.985.

The result in table 4 showed the computed F (1,297) = .000, p>.05. Hypotheses 2 was therefore accepted, this indicated that type B personality is not significantly related to academic achievement of secondary school students in Obio/Akpor.

Discussion of findings

The study revealed that personality type A and B do not significantly relates to academic achievement of students. However, type A personality show a relationship to academic achievement. This findings however disagree with that of Lengnick-Hall and Sanders (2007) who conducted numerous studies matching personality type to performance with significant correlations. Also Westerman et al. (2012) expanded Lengnick-Hall and Sanders' research by examining relationships between personality type, learning environment, and performance. They found that personality remained a significant predictor of student performance, specifically related to the dimension of introversion. It is unclear how measures of performance were determined; however, these results certainly support the idea that personality type may influence performance. Performance variables such as cumulative grade point averages over the course of years have been studied in relation to personality type. Rosati (2009) observed type differences for students at the lower end of the academic range with no distinction by type for the higher level students

Conclusion and Recommendations

The results of this study have been presented with associated explanations. First, the participants' scores were discussed and data were presented. Descriptive statistics and an outline of performance data followed. Next, the assumptions of regression analysis were addressed. Lastly, the results of the data analysis and a description of further correlation analysis were presented. Although there was no statistically significant predictive value of personality type on student performance, other interesting questions have emerged from the data. Understanding that these particular variables do not present a problem in educational settings may be of great value to practitioners. Additionally, the underrepresentation of the Intuitive personality type may be worthy of further exploration in terms of self-selection. This possibility will be due to location or family background, Further, the results of this study indicate that further research with larger sample sizes may be necessary in order to verify predictive validity.

Recommendation

The following are recommended:

1. Similar studies should be conducted using volunteer and nonvolunteer participants. This would remove the extraneous variable that volunteer participants may have similar personality traits or learning styles thereby reducing the potential of skewing the sample population.

2. Classroom teachers should intensify efforts to deal properly with students who exhibit uncommon behaviours among their peers. Also, a referral service should be made to school guidance counselor for counselling services.

3. It would be prudent to compare face-to-face and distance learning environments in terms of learner characteristics and performance. Considering that this study did not confirm the findings revealed in other similar studies, comparisons may be needed in order to delineate important personality characteristics and learning styles in a variety of learning environments.

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