Personality Traits, Cognitive Styles and Academic Success of Secondary School Students in Ondo State
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Abstract: The study investigated the academic success of secondary school students in Ondo State. The study employed the survey design technique. The population for the study consisted of secondary school students III in Ondo State. The sample of 500 students was selected using simple random sampling technique. Three Local Government Areas (LGAs) were selected from the three senatorial district in Ondo State using simple random sampling technique. Fifteen secondary schools were selected from the three LGAs using simple random sampling technique. Thereafter, 500 students were selected across the 15 schools using intact class of the senior secondary school students III. An adapted instrument titled “Personality Traits, Cognitive Styles and Academic Success Questionnaire” (PCAQ) containing four sections was used to collect data from the respondents. Data collected were analysed percentage, Pearson product correlation coefficient and multiple regressions. The results showed that 40.8% of the students possessed high level of academic success; 34.0% had moderate level while the remaining 25.2% of students demonstrated low level of academic success. The results showed that neuroticism with 45.4% was the prevalent trait among the students. Also, the results showed that 68.4% of the students employed field dependent cognitive style. Again, the results showed positive and significant relationship between openness (r = 0.991; p < 0.05); conscientiousness (r = 0.991; p < 0.05), extraversion (r = 0.989; p < 0.05), agreeableness (r = 0.984; p < 0.05) and neuroticism (r = 0.984; p < 0.05) and academic success of students. Further, it was showed that field dependent cognitive style had negative and significant relationship at (r = -0.477; p < 0.05) while field independent cognitive style had positive and significant relationship (r = 0.989; p < 0.05). The results revealed that openness (t = 6.12; β = 0.41); conscientiousness (t = -455; β = -024), extraversion (t = 9.1; β = 0.28); agreeableness (t = 1.66; β = 0.047) and neuroticism (t = 1.92; β = 0.055). Also, the results for cognitive styles showed that field dependent (t = -11.03; β = -0.069) and field independent yielded (t = 7.12; β = 0.00). While the results of openness, extraversion and neuroticism were significant at 0.05 level of confidence, values of agreeableness and conscientiousness were not significant. Also, both field dependent and field independent cognitive styles were significant at 0.05 level of confidence. It was concluded that more students demonstrated neurotic trait and few had high level of academic success.

Keywords: Academic success, personality traits, cognitive styles, secondary school students.

INTRODUCTION
It is imperative that for any student to realize his/her aspirations such a student must perform well academically. In most cases, aspirations are aborted because of the inability of an individual to attain success in academic. Success in academic may constitute all that students acquire from schooling, and totality of experiences accruing from their exposure to schooling. According to Mishra [1], success is the quality of knowledge, skills, attitudes and value acquired in the cognitive, affective and psychomotor domains of educational objectives for necessary self-reliance, effective citizenship, responsiveness to opportunities and challenges of life. It is believed that poor performance of secondary school students in examinations can hamper the realization of aims of secondary school education in Nigeria and this may have great influence on students’ self-esteem, motivation and perseverance. To Chamorro-Premuzic [2] academic success is the performance of students in academic settings. To some extent, academic success means how students demonstrate their level of
competence and mastery of a subject through completion of multiple tests of competence in a particular domain of education. It is the how far and well students can achieve in their academic. From above, it is pertinent to state that the quality of students’ academic success is basically determined through effective assessment method used to measure the level of competence and performance exhibited. It is the performance of students in assessments that will ultimately determine their academic success.

In Nigeria, the academic success of secondary school students is usually measure through their performance in the Senior School Certificate Examinations. However, there is no doubt that students in secondary schools are constantly performing poorly in the external examinations such as West Africa Senior School Certificate Examination (WASSCE) and National Examination council (NECO – SSCE). This perennial decline in education matter has become a source of concern to all the stakeholders in the education sector in the country [3]. For instance, Uwadiae [4] claimed that students’ performance in the West African Senior School Certificate from 2001-2005 has witnessed mass failure. Also, Bello- Osagie and Olugbamila [5], indicated that results between 2000 and 2012 revealed that the academic performance of students was below fifty percent (50%). The authors further explained that the performance of students in the National Examination Council (NECO – SSCE) showed that only 5.1% of the candidates who sat for the examination obtained credits levels passed and above in five subjects including English Language and Mathematics. Also, in 2010 May/June WASSCE, out of the 1, 135, 557 candidates that sat for the examination, only 37, 071 (24.94%) obtained five credit level passes and above in English language and Mathematics [4]. Again, there was poor performance of students in major subjects such as English Language during the WAEC May/June 2014. The results showed that only 31.28 percent obtained credit out of the candidates who sat for the examination [6].

In Ondo State, the performance of secondary school students in the public examinations is not that better. In the past examinations, the percentage of students from Ondo State who obtained credit passes in five subjects and above including English Language and Mathematics in public secondary schools in the Senior School Certificate Examination conducted by the West African Examinations Council (WASSCE) between 2007 and 2012 ranged from 16.7% and 38%. While in the National Examinations Council results ranged from 3.2% to 27% between 2007 and 2012 [7]. This awful performance in examinations showed the level of students’ achievement, in other words, the students’ academic success in schools. Some of the consequences of this are that the situation has not only reduced graduate output and increased cost of education. It has also reduced the admission opportunities for students seeking admission for higher degrees.

In the past several studies have identified factors that could affect academic success of students. Some of these factors include learning styles [10]; poorly trained teachers and non-provision of the needed instructional materials [11] and poor study habit [12]. Apart from the above, it is also possible that factors such as students’ personality traits and cognitive styles can be responsible for academic success of students.

In the meantime, personality is considered a dynamic organization within an individual which determines his characteristic behaviour and thought. Adeniyi [13] opined that an individual’s characteristics, disposition, behaviour, like or dislike form his/her peculiarities which makes him different from other people. Also, Oladele [14] expressed that it is the unique and distinctive characteristics which set a person apart from another. Personality trait resembles the differences between individual’s frequency and intensity of thinking, behaving and feeling in certain ways [15, 16]. There is no doubt every individual has a type of trait that is dominating in his personality. The type of trait that an individual displays will go a long way in determining his behaviour and more importantly, his effectiveness. In their submission, Chamorro-Premuzic and Furnham [17] believed that excellence in academic cannot be guaranteed without non-cognitive factors including variables related to personality dispositions. Again, previous studies have also established that personality and academic achievement are related [18, 19, 16].

In the past, studies have shown that specific functions are associated with the Big Five which are openness, conscientiousness, extraversion, agreeableness and neuroticism. For instance, conscientiousness is regarded as the ability to persist in
organising and processing information Research has established that cognitive ability is one important determinants of academic success [31. Several cognitive styles have been identified. Examples are dependence-field independence and reflexivity-impulsivity dimension, complexity – simplicity cognitive, style conceptualization etc [32]. However, this study dwelt mainly on field independence and field dependence. According to Muhammad [33] field dependent learner is someone who is mostly dependent on the materials given to him in his environment. Noroozi [34] revealed that field dependence students are higher achievers. Contrarily, Daniels and Moore [35]; Hyde [36] and Govers [37] indicated that field independence learners perform better than field dependence in their academic.

Finally, Muhammad [33] pointed that students with field-independent cognitive style have higher academic achievement than students with field-dependent cognitive style. Besides, Ates and Catalogu [38] indicated that individuals with field-dependent cognitive style cannot deal with the subject perceived separately from the surrounding elements. This means that those individuals who have gained more academic achievements tend to be field independent in comparison to those who are less successful in their studies. From the above, it be inferred that field-dependence negatively influence the students’ academic success, whereas field-independence enhances positive academic success [39-42]. However, Shoe and Leila [23] revealed positive relationship of field dependence and field independence students and the academic achievement. Arising from the inconsistence findings on the above subject matter, the study therefore sought to examine the relationship between each of personality traits, cognitive styles and academic success of secondary school students.

**RESEARCH OBJECTIVES**

- Investigate levels of academic success among secondary school students in Ondo State;
- Determine the prevalence personality traits among secondary school students;
- Determine the relationship between personality traits and academic success among secondary school students;
- Ascertain the relationship between cognitive styles and academic success among secondary school students; and
- Determine the relative contribution of personality traits and cognitive styles on academic success among secondary school students

**METHODOLOGY**

The study adopted the survey design. The population for the study comprised secondary school students in Ondo State. The sample of 500 students was selected using simple random sampling technique.
Three Local Government Areas (LGAs) were selected from the three senatorial district in Ondo State using simple random sampling technique. Again, 15 secondary schools were selected from the three LGAs using simple random sampling technique. Thereafter, 500 students were selected across the 15 schools using intact class of the senior secondary school students III. An adapted instrument titled “Personality Traits, Cognitive Styles and Academic Success Questionnaire” (PCAQ) containing four sections was used to collect data from the respondents. Data collected were analysed percentage, Pearson product correlation coefficient and multiple regressions.

RESULTS

Research Question One

What are the levels of academic success among secondary school students in Ondo State?

Table-1: Levels of Academic Success of Secondary School Students in Ondo State

<table>
<thead>
<tr>
<th>Levels of Academic Success</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>126</td>
<td>25.2</td>
</tr>
<tr>
<td>Moderate</td>
<td>170</td>
<td>34.0</td>
</tr>
<tr>
<td>High</td>
<td>204</td>
<td>40.8</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The above results showed that 40.8% of the students possessed high level of academic success; 34.0% had moderate level while the remaining 25.2% of students demonstrated low level of academic success.

From the above, it can be concluded that the number of students who possessed high level of academic success was slightly better.

Table-2: Types of Personality Traits Mostly Exhibited by the Secondary School Students

<table>
<thead>
<tr>
<th>Types of Personality Traits</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness</td>
<td>101</td>
<td>20.2</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>46</td>
<td>9.2</td>
</tr>
<tr>
<td>Extraversion</td>
<td>86</td>
<td>17.2</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>40</td>
<td>8.0</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>227</td>
<td>45.4</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 2 above showed that the personality traits that were mostly exhibited by the students in Ondo State were neuroticism (45.4%); openness (20.2%), extraversion (17.2%), conscientiousness (9.2%) and agreeableness (8.0%). From the results, it is evident that majority of secondary school students in Ondo State demonstrated neuroticism trait.

Table-3: Types of Cognitive Styles Employed by the Secondary School Students

<table>
<thead>
<tr>
<th>Cognitive Styles</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Independent</td>
<td>158</td>
<td>31.6</td>
</tr>
<tr>
<td>Field dependent</td>
<td>342</td>
<td>68.4</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From Table 3, 68.4% of the students usually employed field dependent cognitive style while the remaining 31.6% of the students employed field independent style. The results revealed that most of the students adopted field dependent cognitive style

Table-4: Relationship between Personality Traits and Academic Success Secondary School Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness/Academic Success</td>
<td>500</td>
<td>17.17</td>
<td>5.15</td>
<td>0.991</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>56.24</td>
<td>18.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness/Academic Success</td>
<td>500</td>
<td>17.00</td>
<td>5.29</td>
<td>0.991</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>56.24</td>
<td>18.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion/Academic Success</td>
<td>500</td>
<td>17.13</td>
<td>3.71</td>
<td>0.989</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>56.24</td>
<td>18.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness/Academic Success</td>
<td>500</td>
<td>13.87</td>
<td>4.01</td>
<td>0.984</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>56.24</td>
<td>18.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism/Academic Success</td>
<td>500</td>
<td>17.69</td>
<td>6.05</td>
<td>0.984</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>56.24</td>
<td>18.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results above showed the correlation coefficient between personality traits and academic success of students. The results showed positive and significant relationship between openness (r = 0.989; p < 0.05), conscientiousness (r = 0.991; p < 0.05), extraversion (r = 0.989; p < 0.05), agreeableness (r = 0.984; p < 0.05) and neuroticism (r = 0.984; p < 0.05) and academic success of students. All the results indicated a positive relationship between personality traits and academic success. The results nullified the null hypothesis.

Table 5 above showed the results of correlation coefficient between cognitive styles and academic success. The results showed that field dependent cognitive style had negative and significant relationship at (r = -0.477; p < 0.05) whereas, field independent cognitive style had positive and significant relationship at (r = 0.989; p < 0.05). The results rejected the null hypothesis.

Table 6 showed the contribution of each of personality traits and cognitive styles on academic success of secondary school students. The results conclude that personality traits (extraversion, neuroticism and openness) had significant contribution to academic success while the contributions of agreeableness and conscientiousness aspect of personality traits were not significant whereas, both field dependent and independent cognitive styles had significant contribution on academic success.

**DISCUSSION OF FINDINGS**

One the findings emanated from the results was that more secondary school students in Ondo State demonstrated high level of academic success. The findings mean that not too many students demonstrated high performance in their academics. It also authenticated the position of Awosiyan and Opki [43] and Adeyemi [8] that academic performance of students in public examinations in Ondo state was low.

Another finding was that majority of students in the study area demonstrated neuroticism trait. Basically, the neurotic students are believed to suffer from abnormalities which can hinder them to perform effectively in their academic [13, 22]. This findings buttress the fact that few students in Ondo State...
demonstrated high level of academic success because of their neurotic behaviour.

Again, it was revealed that field dependent was the prevailing cognitive style among the senior secondary school students in the state. This means that majority of senior secondary school students in Ondo State relied more on external frames of reference. They depended to a greater extent on their superior social skills to solve academic problems.

Moreover, the findings indicated that there existed positive relationship between personality traits and academic success. However, it was revealed that that openness had the highest influence on the dependent variable followed by extraversion, next was neuroticism and agreeableness while conscientiousness had the lowest contribution to the dependent variable. Previous studies had expressed that openness and agreeableness positively correlated with academic success [44], Furnham, Zhang and Chamoro [25] whereas, it was also established that extraversion, conscientiousness and neuroticism predicted low academic performance [25, 21, 27].

Finally, the findings supported Shoe and Leila [37] that field dependence and field independence positively correlated with students’ academic achievement. However, Cano [39]; Danili and Reid [40] had earlier expressed that field-dependence negatively influenced the students’ academic success, but field-independence enhanced positive academic success [41, 42]. It can be inferred from the above that cognitive styles and students’ academic success are significantly related but field independent students have more academic success.

CONCLUSION/RECOMMENDATIONS

The study concluded that most secondary school students in Ondo State exhibited neuroticism trait and employed field dependent cognitive style and those have restricted only few of them to demonstrate high level of academic success. It is thus recommended that senior secondary school students need to change their cognitive style from field dependent to field independent so that they can be highly analytical in perceiving and processing information. It is also recommended that in order for students to overcome abnormalities which can hinder them to perform effectively in their academic, they should be reality and be less emotional about their academic matters.

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