

Academic Self-Efficacy, Locus of Control and Academic Performance of Secondary School Students in Ondo State, Nigeria

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Abstract

In Nigeria, emphasis has been placed on secondary school students' academic performance because of its direct positive impact on national development. Young students in secondary schools today are expected to be leaders of tomorrow and their academic performance is sine qua non for gaining admission into higher institutions and the quality of manpower the nation can boast of in the future. Unfortunately and generally, secondary school students' academic performance in Nigeria is a serious matter for concern. Many researchers in recent time are interested in the factors affecting academic performance with a view to finding permanent solutions to the problems of poor academic performance of secondary school students. It is on this premise that the current study was conducted to examine the influence of some psychological factors on students' academic performance. Descriptive research design of correctional type was used for the study. The sample consisted of three hundred and sixty four students randomly selected from ten secondary schools. Two standardized instruments were used to collect data from the sample while students' scores in their previous promotion examination were used to measure their academic performance. Through multiple regression analysis, the researchers found that academic self-efficacy and locus of control jointly predicted academic performance. Further analysis revealed that academic self-efficacy significantly predicted academic performance while locus of control was not a good predictor. It is recommended that teachers, school management, school administrators and counselling psychologists should use appropriate psychological interventions to enhance academic self-efficacy of secondary school students.

Key words: Academic self-efficacy, Locus of control, academic performance, secondary school students.

1. Introduction

Academic performance is one of the top priorities in schools. It is so important that parents, teachers and society in general are much worried and apprehensive about the way to improve it. It is used to measure the extent to which a student, teacher, school or institution has achieved the stated educational goals. Academic performance which is the yardstick to measure educational outcomes is paramount to the economic, scientific and technological advancement of a nation. Parents send their children to school and teachers educate students with one aim or objective in mind, their success. Indeed academic performance has been investigated with relation to cognitive ability. Many researchers that investigated academic performance had focused on the link between intelligence Quotient (IQ) and academic achievement (Snow & Yalow, 1982; Jansen, 1998). However, Chamorro-Premuzic and Furnham (2006) reported that cognitive abilities alone are not sufficient to account for individual differences in academic success or failure. Thus, this study sought to investigate the contributions of psychological skills such as self-efficacy and locus of control to the prediction of academic performance among secondary school students in Ondo State of Nigeria.

Self-efficacy is the measure of one's competences to complete tasks and reach goals (Ormrod, 2006). It influences every aspect of human endeavours. It could be referred to as a person's belief in his or her ability to successfully accomplish a specific task. It also refers to beliefs about one's capabilities to learn or perform behaviours at designated levels (Bandura, 1986, 1997). Much research shows that self-efficacy influences academic motivation, learning and achievement (Schunk, 1994; Pajares, 1996).

Self-efficacy is one of the concepts under social learning theory of Bandura which postulates that human achievement depends largely on interactions between one's behaviours, personal factor (e.g. thoughts, beliefs), and environmental conditions (Bandura 1986, 1997). Learners obtain information to appraise their self-efficacy from their actual performance, their vicarious experiences, persuasions they receive from others, and their psychological reactions. Self-efficacy beliefs influence task choice, efforts persistence, resilience and achievement (Schunk, 1995; Bandura, 1997). Compared with students who doubt their learning capabilities, those who feel efficacious for learning or performing a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level.

Another variable of interest in this study is locus of control. Locus of control is a theory in personality psychology referring to the extent to which individuals believe that they can control events that affect them. The understanding of this concept was developed by Julian B. Rotter in 1954 and has since become an aspect of personality studies.

The locus of control of a person is conceptualized as either internal or external. Those who believe that their own behaviours determine the positive reinforcement they receive and that they have control over their own lives are internal. Individuals with external locus of control are those who believe that the rewards they receive are the result of fate, luck, character or other external circumstances. Such individuals attribute their problems to environmental factors.

2. Literature Review

2.1. Academic Performance and Academic Self-Efficacy

Academic self-efficacy which is described as personal judgment of one's capabilities to organize and execute course of action to attain designated types of educational outcomes-performance has been reported to promote academic achievement directly and also indirectly by increasing academic aspiration and pro-social behavior (Bandura, Barbaranelli, Caprara & Pastorelli, 1996). Studies have reported a significant influence of academic self-efficacy on academic performance (Vrugt, Langereis & Hoogstraten 1997; Stajkovic & Luthans, 1998; Wolters & Pintrich, 1998; Adeyemo, 2007; Akomolafe, 2010).

The positive links between academic self-efficacy and academic achievement has been reported (Pintrich & De Groot, 1990; Schunk, 1994; Chemers, Hu & Garcia, 2001, Greene, Miller, Crowson, Duke & Akey, 2004; Sharma & Sibereisen, 2007). For example, Green et. al. (2004) tested a model explaining the impact of 220 high school students' perceptions of classroom structure on their academic self-efficacy, instrumentality and academic achievement. Self-efficacy had a direct positive relationship demonstrating the importance of self-efficacy for successful learning.

Downs (2005) conducted a study on the influence of self-efficacy on Native American high school students' academic performance. The finding revealed that self-efficacy significantly and positively correlated with academic performance. Schallert (2006) found in his study that self-efficacy significantly predicted students' academic achievement in sciences. Pajares and Kranzler (1995), Pintrich (2000), Zimmerman (2000) found in their various studies that self-efficacy significantly influenced students' academic performance. Klassen, Krawchuk, Rajani (2008) found that academic self-efficacy was a strong predictor of academic performance. However, contrary findings have been reported by a few empirical studies. For instance, Saunders, Davis, William & Williams (2004) and Loo and Choy (2013) found that self-efficacy had small positive effect on academic performance. Reynolds and Weigand (2010) examined the relationships among academic attitudes, psychological attitudes and academic achievement with a sample of 164 undergraduate first year students. The researchers found that self-efficacy was not significantly related to academic achievements. Jeffreys (1998) also reported inconsistent findings regarding the relationship between self-efficacy and academic achievement of University students. Self-efficacy did not predict academic achievement among the students.

2.2. Academic Achievement and of Locus Control

An extensive review of literature by Findley and ve Cooper (1983) shows that locus of control influence learning. When association is found between locus of control and academic achievement, the association is found to be stronger in adolescents compared to adults or children.

A study on locus of control among Iranian students by Barzegar(2001) using the I-E locus of control Scale by Rotter indicates that locus of control was a factor predicting students' academic performance. Knowles and Kerman (2007) found that students with internal locus of control tend to perform better in academic courses compared to those with external locus of control. Other studies (such as Biggs, 1997; Nejati, Abedi, Agbaci & Mohammadi, 2012) have reported a strong relationship between locus of control and academic achievements.

Anakwe (2003) examined the relationship between locus of control and secondary school students' academic

performance. The findings showed a significant positive relationship between academic performance and locus of control. Shepherd, Owen, Fitch and Marsall (2006) found that students with higher GPA group reported higher score in internal locus of control. Nejati, Abedi, Agbaci and Mohammadi (2012) investigated the relationship between locus of control and the academic performance of students by considering the role of life quality and satisfaction with life. The outcome of the study revealed that locus of control significantly correlated and the academic performance of the students. Dincüyrek, Güneylü, and Çağlar (2012) found no significant relationship between locus of control and academic students.

In this paper, academic self-efficacy and locus of control have been chosen due to different conclusions reached by studies in the literature which examined the relationship between academic self-efficacy, locus of control and academic performance. Some researchers found that academic self-efficacy and locus of control are positively related to academic success (Findley & Cooper, 1983; Cassidy & ve Eachus, 2000, Derin 2006; Adeyemo, 2007; Akomolafe 2010) whereas some others displayed that they had no impact on academic performance (Jeffreys, 1998; Reynolds & Weigand, 2010; Dincüyrek et al 2012). The aim of this study is to obtain a new result about this subject and compare it with the conclusions of previous studies. Base on the review of literature the following research questions were raised for the study

1. What is the combined contributions of academic self-efficacy and locus of control to the prediction of academic performance of secondary school students?
2. What is the relative contribution of academic self-efficacy and locus of control to the prediction of academic performance of secondary school students?

3. Research Methodology

3.1. Research Design: The study employed the use of exposit facto design. This was because independent variables (academic self-efficacy and locus of control) being investigated had already occurred. Thus, no manipulation of any sort of the variables by the researchers as could have been done for experimental studies.

3.2. Population: The population of this study comprised all secondary school students in Ondo State, Nigeria.

3.3. Sample and Sampling Techniques: The sample consisted of three hundred and sixty four students randomly selected from secondary schools. Stratified random sampling technique was used for the study.

3.4. Instruments: Two adopted instruments were used in the study.

3.4.1. Self-in-School Scale: The self-in-school scale by Downs (2005) was used to measure the levels of the students' academic self-efficacy. The scale is a 15 item likert scale with options ranging from Completely false (1) to completely true (7). The items in the scale include "I have the ability to do well in my school work, I am doing a good job in my classes". The scale has crombach (α) of 0.91.

3.4.2. The Locus of Control of Behaviour Scale: The Locus of Control of Behaviour Scale constructed by Craig, Franklin and Andrews (1984) was used for the study. The scale is a 17-item scale measuring the locus of control of behaviour. It was constructed with reference to Internal and External Control of Reinforcement scale by Rotter (1966). Respondents indicated their degree of agreement with each item by ticking one of the four options-Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). For the purpose of minimising the possible effect of social desirability in responding, some items reversed in terms to internality and instructions emphasised no right or wrong answers. The seventeen (17) item test was scored in the externality direction. That SA=5, A = 4, D=1 and SD = 0. The seven items relating to internality (items 1, 5, 7, 8, 13, 15 and 16) were reversed such that SA = 0, A=1, D= 4 and SD= 5 respectively.

According to Nunnally (1967), the coefficient alpha for the 17 items was .79. This demonstrated that the scale has high internal reliability. A test-retest reliability of the scale was determined by Salami (1999) using Nigerian students. Salami (1999) reports a reliability coefficient of .75. This correlated with Rotter's Internal and External Control of Reinforcement Scale ($r = .67$ for male and $r = .67$ for females). This shows that the instrument is suitable for Nigerian respondents. To further affirm the reliability coefficient value of the scale, the researcher with the assistance of co-researcher, obtained 0.83 coefficients using a test-retest method.

3.5. **Data collection:** The researchers administered the instruments with the aid of 3 research assistants who were postgraduate students in the University. The respondents were given enough time to express their honest feelings without any bias. The scales were retrieved from the respondents immediately after completion. Scores of students in English and Mathematics were collected from their school records. They were used as the measure of their academic performance.

3.6. **Data analysis:** Multiple regression analysis was used to analyse the research questions. Academic self-efficacy and locus of control served as independent variables while academic performance served as the dependent variable

4. Results

Table 1: Inter-correlational matrix of Academic Self-Efficacy, Locus of Control and Academic Performance (N = 364)

| Variables | 1 | 2 | 3 |
|---------------------------|------|-----|---|
| 1. Academic self-efficacy | 1 | | |
| 2. Locus of Control | .31* | 1 | |
| 3. Academic performance | .36* | .06 | 1 |

* = P < 0.05 (Significant results)

Table 1 shows the relationships between academic performance and other variables in the study. The results showed that there was a significant positive relationship between academic performance and academic self-efficacy ($r = .36, p < 0.05$). The table also revealed that there was no significant positive relationship between academic performance and locus of control ($r = .06, p > 0.05$).

Table 2: Summary of Multiple Regression Analysis between Self-Efficacy, Locus of Control and Academic Performance.

| Multiple R= 0.49 Multiple R ² (Adjusted) = 0.36 Standard error of the estimate = 5.52 | | | | | |
|--|-----|----------------|-------------|---------|--------|
| Analysis of Variance | | | | | |
| Source of variation | df | Sum of squares | Mean square | F-ratio | P |
| Regression | 2 | 1831.92 | 1831.92 | 32.37 | < 0.05 |
| Residual | 361 | 20433.59 | 56.60 | | |
| Total | 363 | 24097.44 | | | |

Table 2 shows the analysis of the combined effect of academic self-efficacy and locus of control on academic performance of secondary school students. The results of the analysis yielded a coefficient of Multiple Regression of 0.49 and Multiple Regression Square (Adjusted) of 0.36. This shows that academic self-efficacy and locus of control jointly predicted about 36% of the variation in the academic performance. In determining the level of significance between the criterion measures (academic self-efficacy and locus of control) and academic performance, Analysis of Variance (ANOVA) was employed and the f-calculated value was 32.36. This is significant at 0.05 level ($F_{(2, 361)} = 32.37; p < .05$). Hence, academic self-efficacy and locus of control when pulled together significantly predicted academic performance of secondary school students.

Table 3: Relative Contributions of academic self-efficacy and Locus of Control to the Prediction of Academic Performance

| Predictor Variables | Unstandardized Coefficients | | Standardized | T | P |
|------------------------|-----------------------------|------|--------------|------|---------|
| | β | SEB | B | | |
| Academic Self-efficacy | 0.32 | 0.04 | 0.41 | 7.95 | < 0.05* |
| Locus of Control | -0.14 | 0.11 | -0.07 | 1.33 | > 0.05 |

* = P < 0.05 (Significant results)

The results obtained in Table 3 revealed that academic self-efficacy made a significant contribution to the prediction of academic performance of secondary school students (Beta = 0.41, $t = 7.95; P < 0.05$) while locus of control did not (Beta = -0.14, $t = 1.33; P > 0.05$).

5. Discussion of Findings

This study examined the contributions of academic self-efficacy and locus of control to the prediction of academic performance of secondary school students. The result of the first research question revealed that the two independent variables jointly and significantly predicted academic performance of the subjects. The magnitude of the effectiveness of the two independent variables was shown in the value of $R = 0.49$ and R^2 (adjusted) = 0.36. The result also showed that 36% of the variance in the academic performance of secondary school students was accounted for by the linear combination of the two variables. The result was indeed reinforced by the value of F-ratio ($F = 32.37, P < 0.05$).

The significant contribution of academic self-efficacy to the prediction of academic performance of secondary school students is in consonance with the outcome of many previous research works (Pintrich & De Groot, 1990; Multon, Brown & Lent, 1991; Schunk, 1994; Pajares, 1996; Chemers, Hu & Garcia, 2001; Greene, Miller, Crowson, Duke & Akey, 2004; Chandler, 2006; Gore, 2006; Zajacova, A., Lynch, S. M., & Espenshade, T. J., 2005; Adeyemo, 2007; Bembemitty, 2007; Campbell, 2007; Hsieh, Sullivan & Guerra, 2007; Kek, Darmawan & Chen, 2007; Klomegah, 2007; Akomolafe, 2010; Akomolafe, Ogunmakin & Fasooto, 2013). However, the current findings are inconsistent with the findings of Reynolds and Weigand (2010) and Jeffreys (1998) who found no significant relationship between academic self-efficacy and academic performance. One possible reason for the inconsistency might have been the reliability of the instruments which Jeffreys (1998) used in her research. Witt-Rose (2003) commented on the reliability measures of the academic variables in Jeffreys' study. The reliability coefficient reported was slightly below an acceptable limit and this might have affected the relationship between self-efficacy and academic achievement.

The motivational influences of self-efficacy via the process of organized goals (Bandura 1997) which lay the foundation for self-regulation of efforts by providing a standard for judging the sufficiency and effectiveness of goal relevant efforts and strategy could be a possible reason for the outcome of this study. Thus, self-efficacy influences academic motivation and learning (Parajes, 1996). Its significant positive contribution to academic performance is not surprising.

Another possible reason is that self-efficacious students participate more readily, work harder, persist longer and have fewer adverse emotional reactions when they encounter difficulties than those who doubt their capabilities (Bandura, 1997). An individual with high sense of self-efficacy believes in his or her capability to carry out a task, invests effort in the activity, persist in the face of difficulty and has an optimistic outlook (Bandura 1997 & Parajes, 1996). Even, Schunk (1994) noted that students with a high sense of self-efficacy beliefs study harder and persist longer when they approach difficulties, whereas students who have low self-efficacy beliefs perform worse at learning tasks and tend to avoid difficult tasks. Therefore, a significant and positive effect of academic self-efficacy on the academic performance is justifiable.

The insignificant relationship that was found between locus of control and academic performance is consistent with Dinciyure, Guney and Caglar (2012) who found no significant relationship between locus of control and academic achievement. The outcome of this study is not consistent with the findings of some previous studies (Bazegar, 2001; Knowles and Kerman, 2007, Anakwe, 2003). One possible reason for the outcome of this study was the instruments used. The instrument used in measuring locus of control was scored in external direction while the instruments used in previous studies were scored in internal direction.

6. Conclusion and Recommendations

Based on the results of this study, the researchers conclude that academic self-efficacy is one of the major factors influencing academic performance of secondary school students in Nigeria. Academic self-efficacy is rooted in learning by observation and direct personal experience. Therefore, education programme of secondary schools should be restructured in such a way that much emphasis would be given to developing academic self-efficacy of students.

School administrators, counselling psychologists and parents should work hard to develop and enhance students' academic self-efficacy by providing all essential conditions and instruments for students' success in schools and learning environment that is conducive and rich in high quality course curricula and offering challenges that can be met.

In addition, teachers should establish and maintain supportive and appealing pedagogical environments and employ teaching and evaluation methodologies which are focused on students' educational needs and overall development.

Finally, counselling and educational psychologists should use appropriate psychological interventions to enhance academic self-efficacy of secondary school students.

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