

## **Perceived Self-Efficacy, Academic Self-Regulation and Emotional Intelligence as Predictors of Academic Performance in Junior Secondary Schools**

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### **Abstract**

The study examined the composite and relative contributions of perceived self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary schools three students. The sample consisted of 500 male and female junior secondary school three students from ten public co-educational secondary schools in Abeokuta South Local Government of Ogun State, Nigeria. Four research instruments: General perceived self-efficacy scale (GSE); Academic self- Regulation Scale (SRQ)-A), Emotional Intelligence Scale (EIS) and Academic Performance Test (APT) were used to collect data. The stepwise multiple regression analysis was used for data analysis. Results indicated that academic self-regulation, emotional intelligence and perceived self efficacy together significantly predicted students academic performance. Out of the three however, self-efficacy was the most potent predictor of the students academic performance, emotional intelligence was the next while academic self-regulation closely followed in the third position. It was recommended among others that counseling sessions and training programmes in self-efficacy, academic self-regulation and emotional intelligence should be organized for students from time to time and government should equip school counselors and teachers to be able to handle this.

**Keywords:** *Perceived Self-Efficacy; Academic Self-Regulation; Emotional Intelligence; Academic Performance*

### **Introduction**

The academic performance of students at all our levels of education in Nigeria, especially at the junior secondary school level continues to decline inspite of the huge public and private investments in the sector. Such an ugly trend calls for an investigation of the role of certain intrinsic factors in the academic performance of students. Thus, this study intends to examine how perceived self-efficacy, academic self-regulation, and emotional intelligence will predict academic performance.

Self-efficacy is a relatively new construct in academic research (Multon, Brown & Lent, 1991; Schunk, 1991a; 1994). Although self-efficacy has been examined with much greater depth in therapeutic contexts, recent studies such as Bandura (1997) and Servaty-Seib (2006) show that self-efficacy holds significant power for predicting and explaining academic performance in various domains A strong sense of efficacy enhances human accomplishment and personal well being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities they set themselves,

challenging goals and maintaining strong commitment to them. (Lent, Brown & Larkin, 1986; Marsh, Walker, & Debus, 1991; Shunk, 1989a; Schunk, 1994; Zimmerman, Bandura & Martinerz-Pons, 1992).

Self-regulation, or systematic efforts to direct thoughts, feelings, and actions, towards the attainment of one's goals (Zimmerman, 2000), has assumed increasing importance in the psychological and educational literature. What began with research on self-control in therapeutic contents has expanded to such diverse areas as education, health, sport, and careers (Bandura, 1997). Academic self-regulation examines the process by which learners set goals, monitor, regulate and control their learning, behaviour, actions and guide their efforts to secure academic achievement (Bembenutty, 2006).

Emotional intelligence is the ability to process emotional information, particularly as it involves the perception, assimilation, understanding and management of emotion. It involves such abilities as identifying emotions in faces, music and stories. Secondly, emotional facilitation of thought involves such abilities as relating emotions to other mental sensations such as taste and colour (relations that might be employed in artwork) and using emotion in reasoning and problem solving. Thus, emotional intelligence could enhance academic achievement (Salovey and Mayer, 1990).

Realizing the problem of declining academic performance and the multiplier effect of building up mediocre in an economy, this research intends to employ perceived self-efficacy, academic self-regulation and emotional intelligence to predict academic performance.

The goal of education is to produce relatively permanent and desirable change in the behaviour of the learner so as be useful to himself and his environment. These days, we continue to experience decline in the level of academic performance among students in all the tiers of education in Nigeria. It is instructive therefore to see whether the factors that are resident in the students themselves (intrinsic factors) can individually or collectively predict academic performance. This study therefore intends to see how perceived self-efficacy, academic self-regulation, and emotional intelligence could serve as predictors of academic performance in order to proffer solutions to the ugly trend.

### **Research Hypotheses**

The following two hypotheses have been tested at 0.05 level of significance for this study:

- i. There is no significant composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students.
- ii. There is no significant relative contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students.

### **Method**

#### **Design**

This research was designed to establish the cause and effect relationship in the realm of causal-comparative studies. A descriptive design of the ex-post facto type was used to show how the independent variables could individually or collectively contribute to academic performance.

#### **Sample**

A sample of 500 (250 males and 250 females) Junior Secondary School three students from ten public Junior Secondary Schools in Abeokuta South Local Government of Ogun State was selected for this research.

Employing the stratified random sampling technique, 25 males and 25 females were selected from the JSS 3 class in each of the ten randomly selected public junior secondary schools to constitute the sample for the study.

### **Instruments**

Four instruments were used for data collection. Three standardized instruments were adopted to measure the independent variables while the dependent variable was measured by Academic Performance Test in English and Mathematics and they are described as follows:

#### ***General Perceived Self-Efficacy Scale (GSE)***

This scale was constructed by Matthias Jerusalem and Ralf Schwarzer in 1979. The scale was created to assess a general sense of perceived self-efficacy with the aim of predicting how individuals can cope with daily hassles and adapt to all kinds of stressful life events. The construct of perceived self-efficacy reflects an optimistic self-belief (Schwarzer, 1992).

The reliability of this instrument was established with samples from 23 nations. Cronbach Alphas ranged from .76 to .90, with the majority in the high (.80s). The scale is uni-dimensional. With regard to validity, criterion-related validity is documented in numerous correlation studies where positive co-efficient were found with favorable emotions, dispositional optimism and work satisfaction. Negative coefficients were found with depression, anxiety, stress, burnout and health complaints (Multon, Brown and Lent, 1991).

#### ***Academic Self-Regulation Questionnaire (SRQ-A)***

This instrument is concerned with the reasons why children do their schoolwork. The scale was developed by Ryan and Connell (1989) for students in late elementary and middle school. The responses to each item are on a 4-point scale. Typically, children have to respond right on the questionnaire by cycling the correct response rather than using an answer sheet.

This version of the (SRQ-A) is the first version that has been used in many studies of school children. It asks four questions about why students do various school related behaviours. Each question is followed by several responses that represent the four regulatory styles used in this scale. Internal consistency estimates for this scale range from .62 to .82 indicating moderate to high levels with three samples (Ryan and Connel, 1989)

#### ***Emotional Intelligence Scale***

The Emotional Intelligence Scale (EI) is a scale of measurement that contains 33 items. Schutle et al developed this scale in 1998. It was based on the model of EI developed by Salovey and Mayer in 1990. The scale is a 5-point scale of measurement;

Where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree.

They contain interpersonal items of EI (e.g. I expect that I will do well on most thing I try) and interpersonal items of EI (e.g. "other people find it easy to confide in me"). Schutle et al reported good internal consistency ( $\alpha = 0.90$ ) and good test retest reliability ( $r = 0.78$ ) for the scale when administered to adults.

#### ***Academic Performance Test***

Academic performance was measured with an objective test of 50 items each in English Language and Mathematics drawn from the West African Examination Council organized Junior Secondary school Certificate Examination questions from 2005 - 2007.

### Procedure

The researchers visited the schools to administer the instruments directly on the subjects. Permission was sought from the school authorities to put the selected students in a separate classroom for the purpose of administering the instruments and the objectives tests. The cooperation received made it possible to have 100 percent rate of return.

### Results

#### *Hypothesis One*

There is no significant composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students. Results of data analyses are presented in Table 1 below.

**Table 1: Model Summary of the Composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
Academic self-regulation, Emotional intelligence, Self-efficacy	.987	.974	.974	1.01186	.974	6231.191	3	498	.000

a Predictors: (Constant), academic self-regulation, emotional intelligence, self-efficacy

The results in Table 1 above indicated that with all the predictor variables entered into the regression model at once, there was a significant prediction of students' academic performance ( $R = .987$ ;  $R^2 = .974$ ;  $F_{(3,498)} = 6231.191$ ;  $p = .000$ ). This means that academic self-regulation, emotional intelligence and self-efficacy all accounted for 97.4% of the variance in the academic performance of students. This finding rejected the null hypothesis, which stated that there is no significant composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students. This implies that self-efficacy, academic self-regulation and emotional intelligence are good predictors of students' academic performance.

The results in Table 2 above showed that when emotional intelligence was entered into the regression model due to the strength of its relationship with academic performance of students, there was a significant prediction of students' performance ( $R = .798$ ;  $R^2 = .637$ ;  $F_{(1,500)} = 875.626$ ;  $p = .000$ ). This showed that emotional intelligence alone accounted for only 63.7% of the variance in the academic performance of students.

**Table 2: Model Summary of the Step-wise regression of the composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
Emotional intelligence	.798	.637	.636	3.77941	.637	875.626	1	500	.000
Emotional intelligence, Academic self-regulation	.966	.933	.933	1.62234	.297	2214.538	1	499	.000
Emotional intelligence, Academic self-regulation, Self-efficacy	.987	.974	.974	1.01186	.041	784.758	1	498	.000

a Predictors: (Constant), emotional intelligence

b Predictors: (Constant), emotional intelligence, academic self-regulation

c Predictors: (Constant), emotional intelligence, academic self-regulation, self-efficacy

Again, when academic self-regulation entered the model as the second predictor variable, there was a significant prediction of students' performance ( $R = .966$ ;  $R^2 = .933$ ;  $F_{(1,499)} = 2214.538$ ;  $p = .000$ ). This means that academic self-regulation along with emotional intelligence accounted for 93.3% of the variance in the academic performance of students. Academic self-regulation therefore accounted for an additional 29.7% of the variance in the students' academic performance. Also, when self-efficacy was entered the model as the third predictor variable, there was a significant prediction of students' performance ( $R = .987$ ;  $R^2 = .974$ ;  $F_{(1,498)} = 784.758$ ;  $p = .000$ ). This means that academic self-regulation along with emotional intelligence and academic self-regulation, self-efficacy accounted for 97.4% of the variance in the academic performance of students. In essence, self-efficacy accounted for an additional 4.1% of the variance in the students' academic performance. This implies that all the three predictor variables are cogent in predicting students' academic performance.

### **Hypothesis Two**

There is no significant relative contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students.

**Table 3: Coefficients of relative contributions of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-13.492	.500		-26.966	.000
Academic self-regulation	.257	.004	.521	70.558	.000
Emotional intelligence	.258	.003	.630	80.234	.000
Self-efficacy	.285	.010	.221	28.014	.000

a Dependent Variable: academic performance

The results in Table 3 above revealed that out of self-efficacy, emotional intelligence and academic self-regulation, self-efficacy was the most potent predictor of students' academic performance ( $\beta = .285$ ;  $t = 28.014$ ;  $p < .05$ ). Emotional intelligence was the next potent predictor of students' academic performance ( $\beta = .258$ ;  $t = 80.234$ ;  $p < .05$ ) while academic self-regulation closely followed in the third position ( $\beta = .257$ ;  $t = 70.558$ ;  $p < .05$ ). The null hypothesis that stated that there is no significant relative contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students was therefore rejected by this finding.

### Discussion, Conclusion and Recommendations

The results indicated that with all the predictor variables entered into the regression model at once, there was a significant composite contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students. This implies that self-efficacy, academic self-regulation and emotional intelligence are good predictors of students' academic performance.

The finding is not unexpected as the trend of the contribution of these interacting independent variables is what has been imagined that is bound to occur under a normal condition. The result revealed that academic self-regulation, emotional intelligence and self-efficacy all accounted for 97.4% of the variance in the academic performance of students. The results also indicated that when emotional intelligence was entered into the regression model due to the strength of its relationship with academic performance of students, there was a significant prediction of students' performance. This showed that emotional alone accounted for only 63.7% of the variance in the academic performance of students. Again, when academic self-regulation entered the models as the second predictor variable, there was significant prediction of student's performance. This means that academic self-regulation along with emotional intelligence, academic self-regulation accounted for 93.3% of the variance in the academic performance of students. Academic self-regulation therefore accounted for an additional 29.7% of the variance in the student's academic performance. Also, when self-efficacy was entered into the model as the third predictor variable, there was a significant prediction of students' performance. This means that self-efficacy along with emotional intelligence and academic self-efficacy accounted for 97.4% of the variance in the academic performance of students. In essence, self-efficacy accounted for 97.4% of the variance in the academic performance of students. In essence self-efficacy accounted for an additional 4.1% of the variance in the student's academic performance. This implies that all the three-predictor variables are cogent in predicting student's academic performance.

For perceived self-efficacy, academic self-regulation and emotional intelligence to have had significant composite contribution to the prediction of academic performance is therefore not amazing. Pajares (2002) had found that students' self-efficacy beliefs influence their academic performances in many ways. Although social cognitive theory does not endow gender with motivating properties, research suggests that students view certain educational domains as masculine and certain others as feminine and gender differences students' academic self-efficacy and self-efficacy to employ self-regulatory, strategies are often employed. Zimmerman, et al (1992) demonstrated that academic self-efficacy mediated the influence of self-efficacy for self-regulated learning an academic achievement. Also, Pajares and Miller (1994) in an examination of the mediational role and predictive power of self-efficacy in mathematics problem solving, found that self-efficacy held greater predictive power for a problem-solving success than did mathematics self-concept, background in mathematics, perceived usefulness of mathematics and gender. The effects of background and gender, however, were significantly related to self-efficacy, supporting Bandura's asserting of the mediational role of self – efficacy on performance.

Wolters (2003) indicated that procrastination was related to college students' self-efficacy ad work-avoidant goal orientation and, to a lesser extent their use of meta-cognitive strategies. Fulk (2003), found out that teachers' major areas of concerns are time management, motivation, and homework. Students greatest concerns are study habits, self-regulation, and test anxiety. Newman (2002), discovered that adaptive help seeking is a unique strategy of self-regulated learning that involves social interaction with others. Martinez – Pons (2002) described a social-cognitive perspective on academic self-regulation, which assumed parents functions as implicit and explicit social models for their children and socially support their emulation and adaptive use of self-regulation. Pape & Smith (2002) asserted that implementation of mathematics reform makes possible the development of self-regulated learners while also necessitating development of self-regulated learners.

The results revealed that out of self-efficacy, emotional intelligence and academic self-regulation, self-efficacy was the most potent predictor of students' academic performance. Emotional intelligence was the next potent predictor of students' academic performance. It is therefore not surprising that the results of this study rejected the null hypothesis, which stated that there is no significant relative contribution of self-efficacy, academic self-regulation and emotional intelligence to the prediction of academic performance among junior secondary school three students. In fact, Zimmerman, et al (1992) demonstrated that academic self-efficacy mediated the influence of self-efficacy for self-regulated learning o academic achievement. Pajares (1996), found that mathematics self efficacy made an independent contribution to the problem solving performance of regular education students (Beta = 387) and of gifted students (Beta = 455) in a path model that control led for the effects of math's anxiety, cognitive ability, mathematics grade, self-efficacy for self regulatory learning and sex. Pajares also reported that girls expressed lower confidence when performance scores did not warrant it and similar confidence when performance score warrant greater confidence.

On the basis of the findings of this study, the following recommendations are hereby made for practice:

- (i) Counselling sessions and training programmes should be organized for students in academic self-efficacy, academic self- regulation and emotional intelligence skills from time to time;
- (ii) The ministry of education should organize train-the-trainers' workshop for counselors and teachers to equip them with self- efficacy, academic self-regulation and emotional intelligence skills; and
- (iii) Further research on perceived self-efficacy, academic self-regulation and emotional intelligence as predictors of academic performance in junior private secondary schools is necessary to determine the

influence of type of school in the prediction of academic performance from the selected independent variables of this study.

## References

- Bandura, A (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, a. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, N.J: Prentice Hall.
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (ED), *Encyclopedia of Human Behaviour* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman (ED), *Encyclopedia of Mental Health*. San Diego: Academic Press, 1998).
- Bandura, A. (1997). *Self-Efficacy: The Exercise of control*. New York: Freeman.
- Bembenutty, H. (2006). Self-Regulation of Learning. *Academic Exchange Quarterly*. Winter 2006, Vol. 10, Issue 4.
- Evans, G.W; Kliewer, W. & Martins, J. (1991). The Role of the Physical Environment in the Health and Well-being of Children. In H.E. Schroeder (ED), *New Directions in Health Psychology Assessment* (pp 127-157). New York: Hemisphere.
- Howse, R.B; Calkins, S.D.; Anastopoulos, A.D.; Keane, S.P; & Shelton T.L (2003). Regulatory Contributors to Children's Kindergarten Achievement. *Early Education and Development*, v/4, n1, p101 – 19 Jan. 2003.
- Lackney, J.A. (1999). The Relationship Between Environmental Quality of School Facilities and Student Performance. Part of a Congressional Briefing to the U.S. House of Representatives Committee on Science. Sponsored by the Environmental Energy study Institute (EESI).
- Lent, R.W; Brown, S.D. & Larkin, K.C. (1986). Self-efficacy in the prediction of academic performance and perceived career options. *Journal of counseling psychology*, 33, 265-269.
- Locke, E.A; & Latham, G.P (1990). *A Theory of Goal Setting and Task Performance*. Englewood Cliffs, NJ: Prentice Hall.
- Marsh, H.W; Walker, R. & Debus, R. (1991) Subject-specific components of academic self-concept and self-efficacy. *Contemporary Educational Psychology*, 16, 331 –345.
- Multon, K.D; Brown, S.D. & Lent, R.W. (1991) Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation, *Journal of Counseling Psychology*, 38, 30 – 38.
- Ott, J.N. (1976). Influence of Fluorescent Lights on Hyperactivity and Learning Disabilities, 9:7, 22-27.
- Ryan, R. M. and Connel J. P. (1989). Perceived locus of causality and internalization: examining reasons for acting in two domains: *Journal of Personality and Social Psychology* 57, 749-761.
- Salovey, P; & Mayer, J.D. (1990). Emotional Intelligence. *Imagination, cognition and Personality*, 9, 185-221.
- Schunck, D.H (2001). Self – regulation through Goal Setting. *ERIC/CASS Digest* ED 462671.

- Schunk D.H. (1994) Self-regulation of self-efficacy and attributions in academic settings. In D.H. Schunk & B.J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational implication* (pp. 75-99) Hillsdale, NJ: Erlbaum.
- Schunk, D.H (1991) Self-efficacy and academic motivation. *Educational Psychology*, 26, 207 – 231.
- Schunk, D.H. & Zimmerman (1994). *Self-regulation of Learning and Performance: Issues and Educational Applications*. Hillsdale, N.J: Lawrence.
- Schunk, D.H. (1989) Self-efficacy and academic motivation. *Educational Psychologist*, review 1, 173-208.
- Servaty-Seib, H. (2006). Education Performance and Persistence of Bereaved College Students. Purdue News Service: (765) 494-2096; *purduenews at purdue.edu*.
- Williams, K.J., Donovan, J.J. & Dodge, T.L (2000). Self-Regulation of Performance: Goal Establishment and Goal Revision Process in Athletes. *Human Performance*, 13(2), 159-180.
- Winne, P.H. (1995). Inherent details in Self-regulated Learning. *Educational Psychologist*, 30, 173-188.
- Wolters, C.A. (2003). Understanding Procrastination from a Self-Regulated Learning Perspective. *Journal of Educational Psychology*, v95 in p179-87 Mar. 2003
- Zimmerman, B.J. (1994) Dimensions of academic self-regulation: A conceptual framework for education. In D.H. Schunk & B.J. Zimmerman (Eds), *Self-regulation learning and performance: Issues and educational implications* (pp. 3-21). Hillsdale, NJ: Eriubaum.
- Zimmerman, B.J. (2000). Attaining Self-Regulation: A Social Cognitive Perspective. In M. Boekaerts, P.R. Pintrich, and M. Zeidner (Eds), *Handbook of Self-Regulation* (pp 13-39). San Diego: Academic Press.
- Zimmerman, B.J: Bandura, A. & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal setting. *American Education Research Journal*, 29,663, 676.