PERCEIVED COMPETENCE, TEACHER AUTONOMY – SUPPORT AND PARENT ATTACHMENT AS PREDICTORS OF STUDENTS' ACADEMIC ACHIEVEMENT

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ABSTRACT

$\mathcal{T}$his paper examined perceived competence, teacher autonomy-support and parent attachment as predictors of students' academic achievement with the view to establishing which of the three variables would best determine students' achievement. Three hypotheses were formulated and tested in the study. The sample consisted of two hundred and fifty students randomly selected in senior secondary schools one in Ijebu-North Local Government Area of Ogun State, Nigeria. Four instruments: Perceived Academic Competence scale (r = 0.77), Teacher – Autonomy support scale(r= 0.90), parent Attachment scale (r = 0.93) and Academic tests (r = 0.78) were used for eliciting data. Result showed that perceived competence, teachers' autonomy support and parents' attachment significant combine in predicting students' achievement (R = .333; R^2 = 111; R^2 (adj) = .100; $F_{(2,242)}$ = 10.073; p < 0.01). However, perceived competence (β = .175; t= 2.676; p>05) was found to be more potent out of the three predictors variables, while teacher-autonomy support (β = .169; t = 2.443; p>05) was the next potent for the prediction of students' achievement.

KEYWORDS: *Perceived Competence, Autonomy-Support, Parent Attachment and academic Achievement.*

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Introduction

Educators and psychologists have continued to work on how to motivate learners in order to improve their achievement in schools, especially with the fall in standard of performance both in internal and public examinations. While some studies have focused on classroom structures and how the structures can foster mastery learning (Ames,1992, Stipek, 1998), others as Deci and Ryan (2000), Gottfried, Fleming and Gottfried (2001), Grolnick and Ryan(1987) have looked at the child to determine what the child needs to become oriented towards learning. How learners are motivated may be more important in understanding and predicting subsequent engagement and learning activities.

A common theme running through these is that the performance level of the child is not necessarily predictive of the child's motivation. Children may perform at a high for many reasons, not solely out of a desire to learn or because of a particular interest in the material at hand. Further still, learners' ability, although necessary for high academic performance, may not be sufficient for persistence and learning out home. However, studies have reported a decline in students' academic achievement motivation, progressive declines in children commitment to their class work (Epstein & McPartland, 1976), the enjoyment of academic activities (Samsome & Morgan, 1992), the pursuit of learning goals (Anderman & Midgley,1997) valuing of effort (Corington, 1984) perceived competence (Eccles, Poser, Wigfield & Freedman-Doan, 1999) ratings of the usefulness and importance of schools (Wigfield, Eccles, Yoon Harold, Arbeton, Freedman-Doan & Bluemenfeld, 1992), a developmental decrease in overall academic intrinsic motivation which particularly marked decreases in the critical content areas of mathematics and science (Gottfried 2001) giving room for the need to study some variables that may improve students' academic achievement.

Perceived competence consists of the individual's believes about his/her ability, effort and external factors such as powerful others that cause success or failure in schools. According to self- determination theory (Deci & Ryan, 1985) and the motivational model of engagement (Connell & Wellborn, 1991), children who believe that their effort is an important actively engaged in classroom activities. Student's belief about their academic capabilities plays an important role in their academic achievement motivation. Thus, their perception plays an important role in their performance in school activity. However, their level of perceived competence is centered on the environment because it is a feeling built on the feedback they from the society. Deci and Ryan (1985) linked it to feedback from significant others such as parents and teachers. According to them the positive information received from significant others fosters the development of competence which in turn impact academic success. These schools also plays a prominent role in the degree at which the student perceived himself/herself coupled with the fact that it is part of the environment in which the child learns vital issues in life.

Student motivation revolves around the concept of intentionality (Deci & Ryan, 1987). An intention is a determination to engage in a particular behavior and it is equivalent to being motivated to act. Autonomy represents an inner endorsement of one's actions. It is the capacity to have one's motivation emerges from internally locused and volitional sources of motivation rather than from an externally locused or a non-volitional causality (Reeve, Nix & Hamm, 2003). When autonomously motivated, student report an internal locus of causality, feeling free, and a sense of choice over their actions (Reeve & Jang, 2006). However, autonomy-support is the interpersonal behavior one person provides to involve and nurture another person's internally locused, volitional intentions to acts such as when a teacher supports a student's psychological needs, interest, preferences and values (Reeve, 2006, Reeve, Deci & Ryan, 2004). When teachers are autonomy supportive, they help students develop a sense of congruence between their classroom behavior and their inner motivational resources. They cannot directly give students an experience of autonomy. Rather, teachers can only encourage and support this experience by identifying students' inner motivational resources and by creating classroom opportunities for students to align their inner resources with their classroom activity. Studies have shown that students with autonomy-supportive teachers, when compared with students with controlling- teachers, experience not only greater perceived autonomy but also

more positive functioning in terms of their classroom engagement, emotionality, creativity, intrinsic motivation, psychological in school(Beware & Deci,1984; Black and Deci, 2000; Boggiano, Fl, Shields, Seelbach & Barett, 1993; Grolnich & Ryan, 1985; Grolnick & Ryan,1987; Miseradino, 1996.

Parent attachment is a concept based on the principle of the attachment theory in development psychology. According to attachment theory, a strong emotional bond with parents during childhood (also known as a secure attachment), is a precursor of secure, emphatic relationship in adulthood. Failure to form this early childhood parental bond will ostensibly give rise to reactive attachment disorder (AOI n.d). Ainsworth (1989) defined attachment as an affection bond; or a relatively long enduring tie with parent as important unique individual that cannot be replaced. Research works on persistence of attachment overtime have reported a continuity of attachment patterns in individuals as the passes (Allen, McElianney, Land & Kupermine, 2004; Nickerson & Nagle, 2005). Thus, adolescents' continuous attachment with parents may be a significant factor for school success. Specifically Jacobson, Edelestein and Hoffman (1997) reported that parental attachment security is significant related to adolescents' attachment to peers, their empathy for others, their pro-social behavior and self-esteem among other developmental outcomes. While a number of studies have shown associations between home characteristics, demographic variables, and achievement, relevant outcomes, some large-scale survey studies have linked specific attributes of parent style of behavior to child achievement and adjustment in school.

The purpose of the current study is to further explicate the potency of each of the variables under study in predicting academic performance of secondary school students, in carrying out this study, two hypotheses were formulated and tested as follow:

1. Perceived academic competence, teachers' autonomy-support and parents' attachment will not significantly combine to predict students' academic performance.
2. Perceived academic competence, teacher's autonomy support and parent's attachment will not relatively predict student's academic performance.

Method

Research Design: The study adopted the descriptive survey research design because the variables to be studied already existed, and there was no need for manipulation of any sort.

Sample and Sampling Technique: The population consisted of all secondary schools in Ijebu North East Local Government Area of Ogun State, Nigeria. Five schools were selected from student population. Fifty students were randomly selected in each school. This brought the total sample size to two hundred and fifty participants

Instrumentation:

1. **Perceived Academic Competence:** Participants' perceptions of their competence in school were measured using Harter (1982, 1985) perception profile for children. This self-report scale assessed perceived competence in two domains (scholastic & athletic) and self. Adequacy with regard to behavior appearance, and social relations. The scale had been widely used and well validated. In this study, only the scholastic competence sub-scale was administered as this was the main concern of the research. The items tapped the respondents' self-perception about their academic performance and ability to learn. Its alpha co-efficient was found to be 0.77 with its response format ranging from 'not at all true' (1) to very true (7). The 4-item ability scale measured the extent to which participants' believed that they possessed the ability to do well in school.

2. **Teachers Autonomy Support:** This was measured with the learning climate questionnaire of Black & Deci (1996). The scale contained fifteen item yielding a score on a seven point scale from 'strongly disagree' to 'strongly agree', which indicates the degree to which teachers were perceived to be autonomy-supportive. Higher score indicated greater perceived autonomy support. The scale has been reported to have an alpha coefficient of internal consistency of 0.90. The scoring was done by scoring each item and adding all the scores concerning the scale. However, item 13 had to be reversed for scoring such that the score when reversed for them 13 became 0.5.

3. **Parent Attachment Scale:** This was measured using parent and peer attachment scale designed by Armsden & Greenberg (1987). The section that measured attachment of parent containing twenty-eight items was used. Participants were requested to respond on 5 point by indicating whether they were almost always true, often true, sometimes true seldom true or almost never true with several items reversed and scored. Scores indicated the strength of participants' relationships with parent on three sub-scales of trust, communication and alienation. The internal reliability analyses with cronbach's alpha for the sub – scales trust, communication and alienation for the items were r = 90; r = 89 and r = 82 respectively. The overall test-retest reliability for the scale has been previously reported to be .93 (Armsden & Greenberg, 1987).

4. **Academic Performance:** Achievement test in two school subjects, namely English language and Mathematics were used in measuring academic performance. Each test was designed in multiple choice formats for uniformity of scoring and immediate feedback. The tests contained five items were validated by experts for their contents and their reliability was ascertained using split-half. The coefficients for the two were 0.78 and 0.81 respectively. The choice of five-item achievement tests for the two subjects was as a result of the fact that, there were many instruments for the sample to respond to and the researcher did not want them to be bored with too many items.

Administration of Instruments: The instruments were personally administered in each of the selected school. Hints were provided to the participants on how to respond to each of the instruments. The instruments were later collected and processed for data analysis. Four sets of the instruments were voided and were therefore removed from the entire data. This brought the total questionnaire analyzed for the study to two hundred and forty six (246). *Method of Data Analysis:* Data was analyzed using multiple regressions statistical package of SPSS 19.0.

Results

Hypothesis one: Perceived academic competence, teachers' autonomy-support and parents' attachment will not significantly combine to predict students' academic performances

Table 1: *Model summary of the Multiple Regression Analysis for the Combined Contribution of the perceived Competence, Teachers' Autonomy Support and Parent's Attachment to the Prediction of Students' Academic Achievement*

Regression	ANOVA					
Model		Sum of Square	df	Mean square	F	Sig.
R= .333	Regression	189.597	3	63.199	10.073	0.01
R Square= 111	Residual	1518.374	242	6.274		
Adjusted R Square = 100	Total	1707.971	245			

a. Predictors: (Constant), perceived competence, teachers' autonomy support and parent's attachment

b. Dependent Variable: academic achievement

The result in Table 1 above revealed that perceived competence, teachers' autonomy support and parent's attachment significantly combined in predicting students' academic performance (R = .333; R^2 = 111; R^2 (adj) = .100; $F_{(2,242)}$ = 10.073; p < 0.01). This revealed that 11% of the total variance in the students' academic performance was accounted for by the combination of perceived competence, teachers' autonomy-support and parents' attachment. However, to determine the contribution of each of the predictor variables (perceived competence, teachers' autonomy support and parents' attachment) in the prediction of students' academic achievement, a stepwise regression was done. Results is shown in Table 2 below.

Table 2: *Model summary of the stepwise multiply regression analysis for the combine contribution of the perceived competence, teachers' autonomy support and parents' attachment to the prediction of stunts' academic achievement.*

Model	R	R Square	Adjusted R Square	Std. Error Of the Estimate	Change of statistics				
					R Square Change	F Change	df1	Df2	Sig.F Change
A	.264[a]	.070	.066	2.55204	.075	18.250	1	244	.000
B	.324[b]	.105	.097	2.50846	.035	9.546	1	243	.002

a. predictors : (Constant), teacher autonomy support

b. Predictors: (Constant), teacher autonomy support, perceived competence

The result in Table 2 above indicated that when teacher autonomy support was introduced into the regression model as the first variable on the basis of its relationship with students' academic performance a significance prediction was indicated (R=.264; R^2= .070; R^2 adj. = .066; $F_{(1,243)}$ = 9.546; p<.05). The two variables accounted for 10.5% of the variance in students' academic performance of the respondents. The findings imply that perceived competence was able to contribute 2.5% to the prediction of students' academic achievement.

Hypothesis Two

Perceived academic competence, teachers' autonomy support and parents' attachment will not relatively predict students' academic achievement.

Table 3: *Beta coefficients and t Ratio for Relative contributions of the perceived competence, teachers' autonomy and parent's attachment to the prediction of students' achievement*

	Unstandardized Coefficients		Standard Coefficient	t-Ratio	Sig
	B	Std. Error	Beta		
(constant)	.560	1.183		.220	.000
Teachers autonomy support	.032	.013	.169	2.443	.015
Parents attachment	0.19	.014	.092	1.304	.193
Perceived Competence	.082	.031	.0175	2.676	.008

a Dependent Variable: academic achievement

The result in Table 3 above showed that perceived competence (with beta value of 17.0%) potent out of the predictor variables parent did not predict students' academic achievement (β = .175; t= 2.676; p>05). Teachers' autonomy support (β = .169; t = 2.443; p>05) was the next potent out of the predictor variables. However, parents' attachment was not a good predictor of students' academic performance (β = .092; t= 1.304; p> .05).

Discussion

The results of the study revealed the combined contribution of teachers' autonomy-support and parents' attachment to the prediction of students' academic performance. The finding suggests that the two variables (teacher autonomy support and parent attachment) constitute significant influences to student's learning outcomes. The studies of Jacobsen and Hoffman (1997) and Reeve and Jang (2006) lend credence to this study when they found out that teachers' autonomy support and parent attachment are of significance to higher academic among students.

The study further examined the relative contribution of teachers' autonomy- support and parent attachment to students' achievement in school. With reference to the data presented in table 3 above, the findings showed that teachers' autonomy-support predicts students' achievement than parent attachment. This finding supports the work of Cubick, Wiest and Wong (2002) which reported that competence was the most significant predictor in all of the regression models that were used in testing for motivational orientation and academic achievement. Learner and Ruger (1997), examined parent adolescent attachment and academic motivation in high school and found that parent attachment and academic motivation in high school and found that parent attachment was indeed positively related to students' motivation to succeed academically.

Papini and Roggman (1992) observed that stronger attachment relations with parents were associated with greater perceived competence in school.

That teacher autonomy support was found to be more significant predictor of students' achievement supports Goodenow (1993) who found that perceived teacher teacher-support was significantly and positively associated with both academic effort and achievement in a sample of junior high school students. Providing autonomy-support in the classroom can come in different ways. For instance, asking students what they want (i.e. asking for their input into the lesson plan) is an autonomy-supportive behavior because the teacher seeks to identify students' psychological needs and integrate them into the day's lesson. Giving student's time to work on a problem in their own way is an autonomy-supportive behavior because the teacher allows students interest and preferences to guide their classroom activity. So also, providing a rationale to explain why a rule exists or why an apparently uninteresting activity is truly of worth, students' attention is an autonomy-supportive behavior because it allows students' sense of valuing to guide their classroom activity. In a nutshell, autonomy-support according to Reeve (2006); Reeve, Deci and Ryan, (2004) Revolves around finding ways to nurture and increase students inner endorsement of their classroom activity.

Conclusion and Recommendation

The findings of this study show strong evidence that students' are more likely to be interested in classroom activities if they feel supported by their teachers. Also, the results suggest that it is important to provide students with an environment in which their sense of competence is maintained and, or, enhanced. In other words, show socializing agent (teachers and parents) respond to a child's performance (whether or not optimal challenge is provided) and the degree to which personal goal setting is encouraged may be critical experiences in term of student's perceptions of competence learn be considered by teachers. The ability of students to perceive the environment to be autonomy-supportive can influence positive learning outcomes. Parents are enjoined to provide their children with a secure emotional foundation necessary for academic competence and achievement.

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