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## **LEARNING STYLE, SCHOOL ENVIRONMENT AND TEST ANXIETY AS CORRELATES OF LEARNING OUTCOMES AMONG SECONDARY SCHOOL STUDENTS**

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### **Abstract**

The study investigated learning styles, school environment and test anxiety as predictors of learning outcomes among secondary school students. The participants were three hundred senior secondary two students randomly selected from randomly selected secondary schools in Iseyin Local Government Area of Oyo State. Their age ranged between 12 and 19 years with mean age of 15.4 years and the standard deviation of 4.56. The participants were administered four valid and reliable instruments to assess the predictors of learning outcomes among the students (learning styles, school environment and test anxiety). Pearson's Product Moment Correlation and Multiple regression analysis were used to analyse the data. The result demonstrated that learning styles, school environment and test anxiety jointly predicts the learning outcomes but test anxiety is the most potent predictor of learning outcomes. The implications of the findings for educational and counselling practice were highlighted.

**Key words:** Learning Styles, School Environment, Test Anxiety, Learning Outcomes

### **Introduction**

Learning outcomes is the central focus that distinguishes the quality and standard of education; it has enjoyed numerous theoretical and empirical concerns from majority of scholars (e.g. Stevenson, 2005; Koetzner, 2006). As a measure of students' learning outcomes, examination occupies a central place in the

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Nigerian educational system and it has been the sole criterion of quality.

Outcomes refer to the external effects of output, that is, the ability of people to be socially and economically productive (Lord, 1984). Thus, during each educational cycle, a student undergoes a series of examinations. The continuous evaluation of educational activities culminates in the final examination, which is held at the terminal grade of cycle. Outcomes, therefore, refers to what comes out of the system, that is the learning achieved in an institution. This includes knowledge, skills, behaviour and attitudes measured by tests or in some other ways. Thus, educational outcomes can be assumed as a function of student input and school input (Adeyemi, 2010).

Many studies have been conducted on students' learning outcomes (Ewell & Ries, 2000; Stevenson, 2005; Koetzner, 2006). Frye (2006) described students' learning outcomes as encompassing a wide range of students' attributes and abilities, both cognitive and affective, which are a measure of how their college experiences have supported their development as individuals. Cognitive outcomes include the acquisition of specific knowledge and skills, as in a major; what do students know that they didn't know before.

Learning styles are cognitive, affective and physiological traits that serves as relatively stable indicators of how learners perceive, interact with and respond to their learning environments (Frick & Mariism, 1994). Learning style could also be defined as the way individuals concentrate on, absorb and retain new or difficult information or skills. It could also be explained that it is not the materials or strategies that people use to learn: those are the resources that complement each person's style. Style was explained to comprise a combination of environmental, emotional, sociological, physical and psychological elements that permit individuals to receive, store and use knowledge or abilities. Schneider (2007) sees learning style as different ways that a person can learn. Educators have, for many years, noticed that some students prefer certain methods of learning more than others.

Learning style refers to the way each individual begins to concentrate on, process and internalize and returns new and difficult information (Dunn & Dunn, 1999; Dunn, Dunn & Perrin, 1994). There are three basic approaches to learning styles and instruction; the first approach is to identify a person's individual learning style and then adapt instruction toward that person's strengths and preferences. A profile of the learner can be developed using different learning style instruments. The



second approach is to identify a person's preferred style and then to give instruction aimed toward the opposite preference in order to strengthen that student's weakness.

The third approach does not even attempt to identify an individual's style but rather uses different instructional methods and media in the overall course design. This approach represents an attempt to reach all learners and assumes that every student will find something in the course that appeals to him or her.

School environment is a very vital factor that needs to be considered because schools are systems in which the environments is just one of many interacting pedagogical, socio cultural, curricular, motivational and socio economic factors. The relationship between people and their environment must be complex, and therefore any outcome from a change in setting are likely to be produced through an involved chain of events, it's the defining and understanding of these mediating chains that will bring a good structure (Higgins, Hall, Wall, Woolner & McCaughey, 2005).

The variables of the school environment that affects learning outcome includes the temperature and air quality, noise, lights, colour and other school build features. Classroom environments factors have been found to be particularly influential on students' results (Ozay, Kaya & Fatih, 2004). The environment or climate is widely acknowledged as a vital aspect of the life of an organization or school (Fraser, 1984). Freiberg (1999) explains that the quality of a working environment reflects the way people interacts and reacts and it is a measure of school characteristics that teacher, administrators, parents and policy makers consider to be important. It is also important to note that poor environment might lead to absence through ill-health (Earthman, 2004) or alienation and truanting (Hallam, 1996), and so a reduction in learning time.

The terms school culture and school climate describe the environment that affects the behavior of teachers and students. School culture is the shared beliefs and attitudes that characterize the district-wide organization and establish boundaries for its constituent units. School climate characterizes the organization at the school building and classroom level. It refers to the "feel" of a school and can vary from school to school within the same district. While an individual school can develop a climate independently of the larger organization, changes in school culture at the district level can positively or adversely affect school climate at the building level (Tableman, 2004).

The interaction of various school and classroom climate factors can create a fabric of support that enables all members of the school community to teach and learn at optimum levels. It has been found that a positive school climate can yield positive educational and psychological outcomes for students and school personnel; similarly, a negative climate can prevent optimal learning and development (Freiberg, 1998; Johnson & Johnson, 1993, 1997; Kuperminc et al., 1997; Kuperminc, Leadbeater & Blatt, 2001; Manning & Saddlemyre, 1996).

Webster and Fisher (2003) investigate whether a relationship exists between school-level environment and student outcomes. The results of these analyses show that various factors of the school-level environment were linked to improved student outcomes. Relationships were also found between teaching practices and student outcomes.

Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional, and behavioral components. (Seligman, Walker & Rosenhan, 2001). These components combine to create an unpleasant feeling that is typically associated with uneasiness, fear, or worry. Anxiety is a generalized mood condition that occurs without an identifiable triggering stimulus. As such, it is distinguished from fear, which occurs in the presence of an observed threat. Additionally, fear is related to the specific behaviors of escape and avoidance, whereas anxiety is the result of threats that are perceived to be uncontrollable or unavoidable (Ohman, 2000).

Another view is that anxiety is a future-oriented mood state in which one is ready or prepared to attempt to cope with upcoming negative events (Barlow, 2002). It is considered to be a normal reaction to stress. It may help a person to deal with a difficult situation, for example at work or at school, by prompting one to cope with it.

Test anxiety is a situation-specific personality trait that occurs before, during and after a testing session (Michele, 2006). Research reports that test anxiety may occur when an afflicted individual views any type of evaluative situation as being a personal threat that negatively affects academic performance by the evaluation practices of the classroom teacher (Maehr & Midgley, 1991).

Test anxiety is the uneasiness, apprehension, or nervousness felt by students who have a fear of failing an exam. Students suffering from test anxiety may experience any of the

following: the association of grades with personal worth, fear of embarrassment by a teacher, fear of alienation from parents or friends, time pressures, or feeling a loss of control. Emotional, cognitive, behavioral, and physical components can all be present in test anxiety. Sweating, dizziness, headaches, racing heartbeats, nausea, fidgeting, and drumming on a desk are all common.

An optimal level of arousal is necessary to best complete a task such as an exam; however, when the anxiety or level of arousal exceeds that optimum, it results in a decline in performance because test anxiety hinges on fear of negative evaluation. Sometimes, a certain amount of anxiety can be beneficial when it leads to excitement and enthusiasm, it has negative effects when it causes worry, confusion, fear and lowering of self-esteem (Arch, 1987). Increased cognitive and emotional alertness are basic reactions in test situations.

Test anxiety includes two components: worry and emotionality. Operationally worry can be defined as "cognitive concerns about the consequence of failure and emotionality as the physiological reactions of the autonomic nervous system to stress" (Liebert & Morris, 1967, p. 976). A strong connection has been found between the Worry and Emotionality components. However, they can be distinguished since the Worry component is more correlated with academic performance than the emotionality component (Liebert & Morris, 1967).

Test anxiety represents a tendency to expect failure in test situations and is therefore closely related to cognitive school performance than is general anxiety. Test anxious individual responds to the testing situation with worry reaction and irrelevant thoughts that interfere with effectiveness on their tasks and children who have low levels of test anxiety are more successful on complicated tasks and on timed test than their peers who have high level of test anxiety in situation without time limits, the anxious children will do more better academically than those with no anxiety (Michele, 2006). He also stated that the differences in academic performance between anxious and unanxious children are minimal in noncompetitive situations.

The effects of test anxiety are not limited to the assessment session itself. Students' study skills play a role in how test anxiety influences academic performance. Students with high test anxiety and poor study skills do not learn the material as well as test anxious students with good study skills; this effect is demonstrated in the level of performance on tests including

practice test which have no bearing on their grades (Birenbaum & Pinku, 1997).

There is an increase in poor academic performance among secondary school students; due to this increase, there arise the need to investigate the causes of these poor performances. With this background knowledge, this research seeks to find out how learning style, school environment, test anxiety and self-efficacy serve as a determinant of learning outcome; to explain the relationship among these variables and how each compliments each other in enhancing learning outcome.

Teachers will be furnished with instructions on how they can depart from the traditional teaching styles and classroom management approaches that usually cause negative learning outcome and providing failing students with instructional approaches responsive to their learning style preferences.

### **Research Questions**

- 1) To what extent could the joint contribution of each of the independent variables (learning style, school environment and test anxiety) to the prediction of learning outcome of students?
- 2) What is the relative contribution of each of the independent variables to the prediction of learning outcome of students?

### **Methodology**

#### **Research Design**

A survey research design that utilized an ex-post facto research type was adopted for the study to explore the prediction of learning outcomes from learning styles, school environment and test anxiety of students.

#### **Participants**

The participants for this study consisted of three hundred (300) senior secondary school students randomly selected from 10 co-educational secondary schools in Oyo state. The participants involved in the study were 180 (60%) males and 120 (40%) females whose age ranged between 12 and 19 years with a mean age of 15.4 years and standard deviations of 4.56.

## Measures

Demographic information was collected from participants regarding their age, gender, schools and class by mean of a demographic data form. The participants completed the three questionnaires: Learning Style Scale (LSS) by Solomon and Felder (2003), School Environment Scale (SES) by Webster and Fraser (2003), Test Anxiety Scale (TAS) by Nist and Diehl (1990) with achievement test on English Language Achievement Test (ELAT) and Mathematics Achievement Test (MAT).

LSS (Solomon & Felder, 2003) was used to measure learning styles. The LSS consists of 44 items which were answered on a five-point Likert Scale ranging from 1= strongly disagree to 5= strongly agree. Example: (1) When I am learning something new, it helps me to talk about it. (2) When I am learning something new, it helps me to think about it. The reliability coefficient (Cronbach's alpha) for the scale was .78.

SES (Webster & Fraser, 2003) was used to measure school environment effects. The instrument consists of 10-items which were placed on scale a five-point Likert Scale ranging from 1= strongly disagree to 5= strongly agree. Example: (1) The environment in my school is conducive for learning. (2) I like to tell people about my school. The reliability coefficient (Cronbach's alpha) for the scale was .91.

TAS (Nist & Diehl, 1990) was used to measure the level of anxiety among students. The TAS consists of 56 items out of which 20 items were adopted by the researcher to which the participants indicated the extent of their agreement or otherwise with the items on the scale. The test adopted a five-point Likert Scale ranging from 1= strongly disagree to 5= strongly agree. Example: (1) I feel nauseated before a test. (2) I panic before and during a test. The reliability coefficient (Cronbach's alpha) for the scale was .90.

ELAT is a 20-item multiple choice English Language achievement test with four options per item (A to D). Some of the test items were constructed by the researchers with the assistance of an expert in the field of English language while few of them were selected from the Past West African Examination Council (WAEC) questions based on the syllabus for SSS 2 classes.

All the test items were submitted to some other experts in the field of English for validation. After some revisions were made,

the experts independently and unanimously recommended the use of the test. To establish the highest independently and unanimously recommended the use of the test. To establish the highest degree of reliability, the test was pre-tested on a small sample of ( $n = 50$ ) randomly selected SSS 2 students. The internal consistency reliability coefficient (Cronbach's alpha) for the scale reported was .75. The test-retest reliability measure of the test with interval of three weeks was .76.

**MAT:** This test consists of 20 multiple – choice items with five options A-E. Some of the test items were constructed by the researchers with the assistance of an expert in the field while some were selected from past West African Examination Council (WAEC) questions based on the syllabus for SSS 2 classes. All the test items were submitted to some other experts in the field of Mathematics for validation. After some revisions were made, the experts independently and unanimously recommended the use of the test. To establish the highest degree of reliability, the test was pre-tested on a small sample of ( $n = 50$ ) randomly selected SSS 2 students. The internal consistency reliability coefficient (Cronbach's alpha) for the subscale reported was .77. The test-retest reliability measure of the test with interval of three weeks was .79.

### **Procedure**

All the participants for the study were administered the five instruments viz: Learning Style Scale, School Environment Scale, Test Anxiety Scale, English Language Achievement Test and Mathematics Achievement Test in their respective schools by the researcher. The researcher with the cooperation of the school counsellor and teachers participated in the distribution and collection of questionnaires from the respondents.

### **Data analysis**

The data collected were analysed using multiple regression analysis to answer the two research questions. It should be noted that the students' scores in English Language and Mathematics were transformed to z-scores before they were used for computation.

### **Results**

The results obtained in the analysis of data collected from the respondents are presented in Table 1 below.

**Table 1: Mean, Standard Deviations and Correlation Matrix of the Predictor Variables (Learning Style, School Environment, Test Anxiety) and the dependent Variable (Learning Outcome) N= 300**

Variables	Mean	SD	1	2	3	4
Learning Outcome	55.1867	6.9334	1.000			
Learning Style	38.9133	5.4960	0.136*	1.000		
School Environment	40.2800	5.5868	0.126*	0.153**	1.000	
Test Anxiety	26.1800	8.4331	0.238**	0.079	-0.153**	1.000

The correlation matrix, mean and standard deviations of the measured variables are presented in Table 1. The results revealed that all the independent variables were significantly correlated with learning outcome. Learning style ( $r = .136$ ;  $p < 0.05$ ); School environment ( $r = .126$ ;  $p < 0.05$ ) and Test Anxiety ( $r = .238$ ;  $p < 0.05$ ).

**Table 2: Regression summary table showing the joint effect of the independent variables on learning outcome among Secondary School Students.**

Multiple R = 0.340

R - Square = 0.116

Adjusted R-square = 0.101

Standard error of the estimate = 6.575

#### Analysis of Variance

Source of Variance	DF	SS	MS	F	P
Regression	3	1663.892	332.778	7.698	0.001
Residual	296	12709.655	43.230		
Total	299	14373.547			

Table 1 shows the effects of the three independent variables to the dependent variable yielded a coefficient regression  $R = .340$ , multiple  $R^2 = .116$ , Accounting for 11.6% of the variation in the Learning outcome among students. Thus, the result from table 1 shows that each of the independent variable (learning style, school environment and test anxiety) jointly predicts the learning outcome among students.  $F(3; 296) = 7.698$ ;  $P < 0.05$ .

**Table 3: Relative Contribution of the Independent Variables to the Dependent Variable**

Variable	B	SEB	( $\beta$ )	T	P
Learning Style	0.242	0.075	0.192	3.234	0.001
School Environment	0.229	0.073	0.184	3.124	0.002
Test Anxiety	0.226	0.046	0.275	4.877	0.000

Results in Table 3 show the relative contribution of each of the independent variables to the prediction of learning outcome among students. Test anxiety ( $B = 0.226$ ,  $t = 4.877$ ,  $P < 0.05$ ); School Environment ( $B = .229$ ,  $t = 3.124$ ,  $P < 0.05$ ) and Learning Style ( $B = 0.242$ ,  $t = 3.234$ ,  $P < 0.05$ ).

### Discussion

Results of the findings revealed that learning styles had significant positive correlation with learning outcomes. This finding is consistent with the earlier research findings as reported by Vermunt (2005); Aremu (2005) that three modes of learning styles (sensory perception, reasoning type and learning environment) significantly predict the learning outcomes. Jegede (1990); Okebukola (1992) and Temisan (2001) also showed that cognitive, affective, concept mapping, problem-solving, motivation and recapitulation have been found either to significantly influence learning outcomes, or to positively correlate with learning outcome. This aptly shows that if the cognitive learning styles could be effectively utilized in impacting knowledge most especially on students, learning outcome of the students could be improved upon.

This, therefore, points to the potency of learning styles as useful methods that could be adopted by students in school learning. The aggregation of the findings of Aremu (2005) showed that learning styles of in-school adolescents in police secondary schools is a pointer to the degree of their learning outcomes. This is by no means at variance with the findings of Frederic (1991) and Gutami (2005) in which learning styles were found to contribute to learning outcomes.

Classroom environment was found to be a significant prediction of learning outcome. This lends a good credence to studies which have shown positive correlation between school environment and learning outcome (e.g. Ozay, Kaya & Faith, 2004; Fraser, 1998). Classroom environment has a specific and particular influence on students result. School environment is widely acknowledged as the most vital aspect of the life of the school (Freiberg, 1998). Positive and supportive school environment helps students in smooth transition from one school



to another which in turn has effects on the students learning outcome. The possible explanation for the result may not be unconnected with students learns better when they perceives their environment positively.

It has been notably found that text anxiety when not properly managed has a significant negative effect on learning outcome of the students. Campus (2002); Williams (2003); Ritter (2004); Akanbi and Ogundokun (2006) had already confirmed that anxiety interferes with learning and test taking behaviour as well as performance and that the outcome of test anxiety is a direct result of either a failing grade or perhaps failing in examination. This implies that, students would perform creditably well when their anxiousness about test taking is reduced. Though a measure of test anxiety is needed to awake the students to reading and preparation for examination, students who are over anxiety about test taking, no matter how intelligent they are may not perform up to expectation unless their anxiety is reduced to the desired level.

### **Implications of the study**

The factors that determine learning outcome when improved upon will go a long way in facilitating, not only improved and high academic performance and realistic vocational aspiration among our school going adolescents but also ensure a high and positive learning outcome that will enable students when they leave school to be capable of effecting high level of economic development, aggressive entrepreneurship and high positive attitude towards satisfaction of needs in general.

Counsellors should be employed to properly diagnose students of the various challenges that should and could affect students in their study. The school environment should be a stimulating environment where students will want to be and learn.

Students should see the school as their home, see teachers as their parents and they should develop a positive attitude towards learning. Understand their anxiety, visit school counsellor, and understand their learning style, know their weakness and strengths.

Test anxious students should be sort for and referred for counseling because students with high test anxiety are not only prone to failure in situations where time factors attenuate performance and retrieval of key information, but even in take-

home examinations. Teachers should use a variety of assessment methods.

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## References

- Adeyemi, T.O. (2010). The school library and students' learning outcomes in secondary schools in Ekiti state, Nigeria. *Asian Journal of Business Management*, 2, 1, 1-8.
- Akanbi, S.T. & Ogundokun, M.O. (2006). Effectiveness of self-efficacy strategies as methods of reducing test anxiety of student Nurses in Ogbomosho North Local Government Area, Oyo state, Nigeria. *African Journal of Cross-Cultural Psychology and Sport Facilitation*, 8, 18-26.
- Arch, E. C. (1987). Differential responses of females and males to evaluative stress. In R. Schwarzer, H. M. van der Ploeg, & C. D. Spielberger (Eds.), *Advances in test anxiety research*, Vol.5 (pp. 97-106). Hillsdale, NJ: Erlbaum.
- Aremu, A.O. (2005). Correlate of learning styles on academic performance of in-school adolescents in Nigeria Police secondary schools. *Personality Study and Group Behaviour*, 25, 75-85.
- Barlow, D. H. (2002). Unraveling the mysteries of anxiety and its disorders from the perspective of emotion theory. *American Psychologist*, 55, 1247-1263.
- Birenbaum, M., & Pinku, P. (1997). Effects of test anxiety, information organization, and testing situation on performance on two test formats. *Contemporary Educational Psychology*, 22, 22-38.
- Campus, B. (2002). Text Anxiety. Retrieved April, 25, 2010 from <http://www.campusblues.com/test.asp.html>.
- Diaz, D. P., & Cartnal, R. B. (1999). Students' learning styles in two classes: Online distance learning and equivalent on-campus. *College Teaching* 47, 4, 130-135.
- DiBartola L.M, Miller M.K, & Turley C.L. (2001). Do learning style and learning environment affect learning outcome? *Journal of Allied Health* 30, 2, 112-115.
- Dunn R & Dunn K.(1999) Teaching Secondary Students through their Individual Learning Styles: Allyn & Bacon.
- Dunn, R., Dunn, K., & Perrin, J.(1994). *Teaching young children through their individual learning styles: Practical approaches from grades k-2*. Boston: Allyn & Bacon.
- Earthman, (2004). Prioritization of 31 Criteria for School Building Adequacy. Retrieved Dec, 12, 2010 from [http://www.aclumd.org/facilities\\_report.html](http://www.aclumd.org/facilities_report.html).
- Ewell, P & Ries, P. (2000). Assessing Student Learning Outcomes: A Supplement to Measuring up 2000. National Center for Higher Education Management Systems (NCHEMS). Retrieved October, 6, 2010 from <http://www.Measuringup:highereducation.org/html>.
- Fraser, B. J. (1998). Science learning environments: Assessment, effects and determinants. In B. J. Fraser & K.

- G. Tobin (Eds.), *the international handbook of science education* (pp. 527-564). Dordrecht, the Netherlands: Kluwer.
- Fraser, B.J. (1984). Differences Between Preferred And Actual Classroom Environment as Perceived by Primary Students and Teachers. *British Journal of Educational Psychology*, 54, 336-339.
- Fredredick, L. (1991). The relationship of cognitive styles to academic performance among dental students. Paper presented at the annual meeting of the Eastern Educational Research Association, Boston, M.A.
- Freeman, V.S, Fell, L.L, & Muellenberg, P. (1998). Learning styles and outcomes in clinical laboratory science. *Clinical Laboratory Science* 11, 5, 287
- Freiberg, H. J. (1998). Measuring school climate: Let me count the ways. *Educational Leadership*, 56, 1, 22-26.
- Freiberg, H. J. (1999). *School climate: Measuring, improving and sustaining healthy learning environments*. London: Falmer Press.
- Frye, R. (2006). Assessment Accountability and Students' Learning Outcomes. Student Learning Outcomes. Retrieved October, 6, 2010 from <http://www.ac.wvu.edu/dialogue/issu2.html>.
- Gee, D. G. (1990). The impact of students' preferred learning style variables in a distance education course: A case study. Portales: Eastern New Mexico University. (ERIC Document Reproduction Service No. ED 358 836)
- Hallam, S. (1996). *Improving School Attendance*. Heinemann Educational.
- Higgins, K.N., Hall, J., Wall, S.L., Woolner, J.K. & McCaughey, D.B. (2005). *Impact of School Environments: A literature review*. The Centre for Learning and Teaching, School of Education, Communication and Language Science, University of New Castle.
- Jegede, O.J.(1990). The effects of Concept mapping on students' anxiety and achievement in Biology. *Journal of Research in science Teaching*, 27, 10, 951 - 960.
- Johnson, W. L., & Johnson, M. (1993). Validity of the quality of school life scale: A primary and second-order factor analysis. *Educational & Psychological Measurement*, 53, 1, 145-153.

- Johnson, W. L., Johnson, A. M., & Zimmerman, K., (1996). Assessing school climate priorities: A Texas study. *The Clearing House*, 70, 2, 64-66.
- Koetzner, J. (2006). Student Learning Outcome. Mendocino College Library Fresno City College. Retrieved October, 6, 2010 from <http://www.jkoetzne@mendocino.cc.ca.us>.
- Kuperminc, G. P., Leadbeater, B. J., & Blatt, S. J. (2001). School social climate and individual differences in vulnerability to psychopathology among middle school students. *Journal of School Psychology*, 39, 2, 141-159.
- Kuperminc, G. P., Leadbeater, B. J., Emmons, C., & Blatt, S. J. (1997). Perceived school climate and difficulties in the social adjustment of middle school students. *Journal of School Psychology*, 34, 4, 101-110.
- Liebert, R. M., & Morris, L. W. (1967). Cognitive and emotional components of test anxiety: A distinction and some initial data. *Psychological Reports*, 20, 975-978.
- Lord, R. (1984). Value for money in education London: Public Money.
- Maehr, M. L., & Midgley, C. (1991). Enhancing student motivation: A school wide approach. *Educational Psychologist*, 26, 399-427.
- Manning, M. L., & Saddlemire, R. (1996). Developing a sense of community in secondary schools. National Association of Secondary School Principals. *NASSP Bulletin*, 80, 584, 41-48.
- Michele, M. M. (2006) Variations in test Anxiety and Locus of Control Orientation in Achieving and Underachieving Gifted and Non-gifted Middle School Students. Unpublished Dissertation, University of Connecticut.
- Nist, P. & Diehl, M. (1990). PHCC test anxiety questionnaire. Retrieved Aug, 20, 2010 from <http://phcc.edu/ods/questionnaire.html>.
- Ohman, A. (2000). Fear and anxiety: Evolutionary, cognitive, and clinical perspectives. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions*. (pp.573-593). New York: The Guilford Press.
- Okebukola, P.A.(1992). Can Good concept Mapper be good problem solvers in science? *Educational Psychology*, 12, 2, 113 - 129.
- Qutami, N. 2005. The relationship between medical students' cognitive method of thinking their sex, their academic level and the degree of their creative thinking. *International Journal of Instructional Media* 32.3:225.

- Ritter, M.R. (2004). Hand Temperature, Test Anxiety and Test Performance: A Correlational Study. Retrieved Nov, 26, 2010 from <http://www.clearinghouse.mwsc.edu/html>
- Seligman, M. Walker, E. & Rosenhan, D. (2001). *Abnormal psychology*. (4th Ed.) New York: W.W. Norton & Company, Inc.
- Solomon, A. & Felder, R.M. (2003). Index of learning styles questionnaire. Available: <http://www.engr.ncsu.edu/learningstyles/ilsweb.html>
- Stevenson, S. (2005). What is Assessment? UAF Provost's Office. Retrieved October, 6, 2010 from <http://www.uaf.edu/provost.html>
- Tableman, B. (2004). School Climate and Learning. *Best Practice Briefs*, 31, 1-10.
- Temisan, A.J. (2001). Concept mapping and Problem-Solving Teaching Strategies as Determinants of Achievement in Secondary school Biology *Ibadan Journal of Educational Studies*, 1, 1, 290 – 299.
- Vermunt, J.D. (2005). Relations between student learning patterns and personal and contextual factors and academic performance. *International Journal of Higher Education and Educational Planning*, 49, 205-234.
- Webster, B.J & Fraser, D.L. (2003). School level environment and students' outcome in mathematics. *Learning Environments Research*, 6, 309-326.
- Williams, D. (2003). Test Anxiety. Retrieved October, 6, 2010 from <http://www.peaceandhealing.coun/anxiety/testanxiety.html>.