Volume 4, No. 2, December 2011

AFRICAN JOURNAL OF INTERDISCIPLINARY STUDIES

ISSN: 0855-9724

African Journal of Interdisciplinary Studies
Volume 4, No. 2
December 2011

ISSN: 0855-9724

All manuscript should be submitted to:

African Journal of Interdisciplinary Studies
c/o Managing Editor
Publications Unit
University of Education
P. O. Box 25, Winneba
Ghana

Cover Design: Patrique deGraft-Yankson,
Department of Art Education,
University of Education, Winneba, Ghana

EDITORIAL LIST

Editorial Office
Publications Unit
University of Education
P. O. Box 25, Winneba
Ghana

Editorial correspondence, including submission of manuscripts should be addressed to:

African Journal of Interdisciplinary Studies
c/o Managing Editor
Publications Unit
University of Education
P. O. Box 25, Winneba
Ghana

CONTENT

EDITORIAL

The African Journal of Interdisciplinary Studies continues to reflect the broad spectrum of researches in the various relevant areas of scholarship. The articles received for this edition were overwhelming and consequently we were only able to publish a few. We anticipate that the remaining would appear in the next edition of the journal.

As a policy, the journal maintains very high standards and this will continue to guide our practice. All the articles in this edition are interesting and should take your knowledge far. I recommend this journal to all.

Mawutor Avoke (PhD)
Professor and Editor-in-Chief
December 2011

African Journal of Interdisciplinary Studies Vol. 4, No. 2, pp 136-142, December 2011, ISSN: 0855 – 9724

G. A. Adelodun
University of Ibadan, Faculty of Education, Department of Special Education, Ibadan, Oyo State, Nigeria
E-mail: dradelodun1@yahoo.com.

Joint effect of multi-factorial studies on the creative behavior of secondary school subjects in selected states of Nigeria

Abstract

This study investigated the joint influence which factors like environments, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure have on the creative behavior of secondary school students. The study is descriptive in nature and it adopted the "ex-post facto" design. Stratified random sampling technique was used for the selection of 1,800 respondents out of 2,620 representing 69 percent of the total population. The mean age for the participants was 13.49 years. Data were collected using two valid and reliable research instruments namely; Ibadan Creativity Assessment Scale, (ICAS a=0.76) and Creative Behavior Determinant Scale, (CBDS a=0.84). The data were analyzed using Multiple Regression and Analysis of variance. The findings showed that environment, attitudinal disposition of parents, teachers' attitudinal disposition and peer pressure significantly influenced creative behavior of the subjects (F(4; 1795) = 298.985; P<.05). The total variance accounted for by the four independent variables taken together was 39.9 percent (i.e multiple R2=.399). The result indicated that when talking about students' creative behavior the four factors are quite relevant towards its determination. Furthermore, an adjusted R2 value of .399 obtained showed that 39.9% of the total variations in students' creative behavior is accounted for by the four independent variables taken together. The remaining 60.1% is due to other factors. The standard error of these estimates is 72.70355. Analysis of variance on Table 2 revealed that the adjusted R2 value was significant at 0.05. This showed that the adjusted R2 value was not due to chance.

Introduction

There is a strong evidence in research that certain factors determine creative behavior (Sylvia, 2000). According to Sylvia (2000), some of the factors that determine creative behavior include: peer pressure, attitudinal disposition of teachers and gender. Whaley and Henderson (2003) are of the opinion that the major factor that determines creative behavior is Environment. Khaleefa (2006), in his own case, stressed that birth-order and Attitudinal disposition of parents are some of the factors that determine creative behavior. Peterson (2008) states in his study that creative behavior is primarily determined by some factors like gender, birth order and parental socio-economic status. For the purpose of this study, focus was on joint influence of factors like environment, attitudinal disposition of teachers and peer pressure on secondary school students' creative behavior. Dubrin (1981) described creative behavior as an act of processing information in such a way that the result is new, original and meaningful. According to Nwazuoke (1996), creative behavior is the ability to demonstrate perseverance in order to achieve in the face of overwhelming odds. It could as well be seen as the ability to demonstrate insightfulness, think divergently and to seek novel situations.

Relationship between creative behavior and environment

The relationship that exists between creative behavior and environment cannot be overemphasized. The experiment carried out by Bouchard (2003) and Bouchard and Henderson (2002) showed that the similarity in creativity scores among relatives grows in proportion to their closeness on the family tree. They observed that the correlations grow smaller as the degree of genetic similarity declines. They also observed that a shared environment increased the correlation in all cases. To separate heredity and environment, one needs to make some selected comparisons.

The study carried out by Bouchard and Henderson (2002) revealed that the creativity scores of fraternal twins are more alike than those of ordinary siblings. Fraternal twins come from two separate eggs fertilized at the same time while identical twins are products of a single egg. Scientifically, we could see that fraternal twins come from different eggs just like other siblings in the family. It stands to reason that they are therefore not more genetically alike than other ordinary siblings in the family. The question that comes to mind is why, then should twins creativity scores be more similar than those of ordinary siblings as revealed in the study conducted by Bouchard (2003). According to Bouchard (2003), the reason is environmental. Parents treat twins more alike than ordinary siblings, resulting in a closer match in creativity scores.

More striking similarities are observed with identical twins who develop from a single egg and have identical genes. Experiment performed by Bouchard and Henderson (2002) shows that identical twins who grow up in the same family have highly correlated scores. This is what one would expect with identical heredity and very similar environments. When identical twins are reared apart, the correlation drops, but only from .86 to .72, (Bouchard, 2003). Psychologists who emphasize genetics believe figures like these show that differences in adult creativity scores are roughly 50 percent hereditary (Casto, Defries, and Fulker, Plomine and Rende, 2005).

In one study, striking increase in the level of creativity occurred in 25 children who were moved from an orphanage to more stimulating environments. The children all considered less creative were moved to an institution where they received personal attention from adults. Later, these supposedly less creative children were adopted by parents who gave them love, a family and stimulating environment. The level of creativity of the children showed an average gain of 29 points. For one child, the increase was an amazing 58 points. A second group of initially less creative children who remained in the orphanage lost an average of 26 points, Skeels (2006).

Another study finds average level of creativity gains of 15 points in 14 nations during the last 30 yeas (Flynn, 2007; Horgan, 2005). These levels of creativity boosts seem to reflect the effect of stimulating environment or other advantages. Support for this interpretation comes from the fact that the longer children stay in stimulating environment, the more their creativity scores rise. This is another encouraging indication that creative performance can be raised by an improved environment Perkins (1995).

Relationship between creative behavior and attitudinal disposition of teachers

One important variable affecting school environment is related to the teachers' expectations of their pupils. The influence of this variable upon students' behavior is a common finding of international researchers. According to Craighead, Kazdin and Mahoney (1996), a teacher's reinforcement of certain types of behavior will cause these behaviors to appear more frequently. Craighead et al (1996) went further to say that children want to receive attention and loved by their teachers, so they behave in the teachers' preferred way.

Considering the following affirmations, one can understand why creative behavior seldom appears in the classrooms, since teachers do not seem to like or value it. For example, according to Alencar and Rodrigues (2008) 95% Brazilian teachers from an elementary school declared that they preferred students who were obedient, sincere, courteous, hardworking and popular with their peers. Characteristics usually associated with creativity, such as high intuition, curiosity, and independence of thought were considered by teachers as not being as important or relevant in the classrooms as the former (Alencar and Rodrigues, 2008).

However, according to Fleith (2009), research on creativity training programmes with teachers showed the possibility of changing repressive attitudes against creative beahviour in the classrooms. He stresses further that his studies with Brazilian teachers indicated the need to start working with them while they are still taking courses at the normal school (teacher preparation schools). Creativity

training programmes can be beneficial to teachers at the normal school in several ways. Informing them about the importance of creativity in the classroom, developing their cognitive creative abilities and helping them to come up with their own suggestions in adapting creative thinking techniques to their academic content (Fleith, 2009).

The effects of teacher training programmes can also be verified on their students behaviours, as some researchers demonstrate (Ott, Wechslei, Torres and Polonia, 2009). If teachers prefer an inductive methodology rather than a deductive one, they will be able to increase their students' fluency, flexibility and sensitivity to problems. However, more of these methodologies seem to be sufficient to increase students' original thinking.

Finally, it is the personal view of this researcher that teaching methodologies need to be combined with teachers' personality characteristics. This could be within an environment that respects students' learning preferences, if creative behavior is to be elicited.

Creative behavior and attitudinal disposition of parents and teachers.

In their studies, Whaley and Henderson, (2003) stress that ideal home and school environments that foster both creative behavior and achievement include parents and teachers that value creativity within the limits of reasonable conformity. Children are praised and encouraged in unusual and critical thinking and production, but the difference does not become a device or a manipulation for avoidance of academic or home responsibility. If in any way creativity takes on a ritualized position of avoiding a parent's requirements or the school's expectations, then creativity will be used as "a way out" of achievement. Peterson, (2008) in his own study lists some recommendations, for parents and teachers for the prevention and cure of under-achievement in creative children. They are;

i. Parents should not, if at all possible, ally with a child against a teacher in the name of creativity. Parents, should communicate their concerns to teachers, but it must be done carefully so that the teachers or school are not "put down" in the process, and the child does not view this as an excuse for not fulfilling school expectations.
ii. One parent should not ally with a child against another parent in the name of creativity or permit the child's creative needs to be the excuse for not doing what the other parent requests. This may cause the child to become rebellious with creativity as his or her excuse.
iii. Parents should not label one child in the family "the creative child". It causes that child to feel pressured to be most creative all the time and causes other siblings to believe that creativity is not possible for them at all.
iv. Encourage intrinsic motivation as well as healthy competition. Children should learn to enjoy the creative process for the joy and satisfaction of their personal involvement. However, they should not be permitted to entirely avoid the competitive areas. They should experience a balance of winning and losing to build confidence.
v. Help creative adolescents to plan a creative future. Though they are under-achievers at this time, it is most critical that they understand that most creative careers are open only to achievers. If they are unwilling to compromise and conform to reasonable requirements, they are likely to close doors to future creative opportunities.

The implication of all the points written above is that if they are strictly adhered to, it will eradicate under achievement on the part of the creative children and their creative behavior will as well be enhanced.

Relationship between creative behavior and peer pressure

Researchers such as Nwokule (1982) and Sylvia (2000) have shown that one of the most powerful cultural obstacles to creative thinking is the pressure of the peer group for conformity. Children and adults alike are influenced by their peers, but children who are still in the process of developing a value system are more vulnerable to negative influences. Parents should take a proactive position in

discussions about friendships during early childhood to lay the foundation for children making good choices later.

There is tendency for children with negative attitude to creative thinking to have negative influence on their peer-groups. Parents should therefore not be hesitant about setting limits for their children if they find them selecting misbehaving or negative friends. If parents observed that a friend is a bad influence on their children, it is best to require that their children discontinue playing with such a person temporarily.

According to Sylvia (2000), it is important for adolescents not to feel pressured by parents about making friends, or they may choose negative peers out of desperation and loneliness. Nwokule (1982) in his own case observed that lonely young people need family encouragement for development of positive interests that will ultimately lead them to positive peer groups and social confidence.

Sylvia (2000) observed that peers who smoke, drink alcohol, use drugs, and oppose school and parents will put pressure on other children to do the same. Peers who are excellent students, involved in extra curricular activities, and are busy building skills and interests are likely to have a positive effect on their mates. She goes further to say that sometimes, parents and teachers may be fooled by teens' school behavior. This implies that occasionally, even positive kids lead a very different and unhealthy social life outside of school.

Purpose of the study

The purposes of this study were essentially to;

i. Find out how the independent variables namely; environment, attitudinal disposition of parents, teachers, attitudinal disposition and peer pressure jointly influence the dependent variable (Creative behavior).
ii. Investigate the extent to which the independent variables determine creative behavior.

Significance of the study

Based on the findings of this study, the teachers, parents, education planners and government could work together to foster creative behavior of the students who will in turn transform the nation to socio-economic and technological heights.

Findings of this study should enable parents to become aware of the factors which seriously determine creative behavior of their children so that parents can be ready, more than ever before to do all within their power to harness those factors for desired goal. Knowledge of the factors that determine creative behavior will help teachers to know how to prepare and implement the school curriculum in a way that students can be encouraged to be creative in dealing with life's challenges.

Furthermore, peer pressure is one of the most important independent variable in this study. Knowing whether or not significant relationship exists between peer pressure and creative behavior will enable parents and teachers train the children to make good decisions about friendships by providing them some criteria for selection of friends. Finally, information obtained from this study can also be used to enhance successful counselling relationship between the school Guidance Counsellor and secondary school students, thereby fostering students' creative behavior.

Methods

Research design

This study is descriptive in nature and adopted the 'ex-post facto' design. This is because the researcher did not manipulate any of the variables of interest but only measured them and retrospectively traced the possible effects of the independent variables (environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure) on the dependent variable (creative behavior).

Population
The target population of this study was public Junior Secondary Schools in three out of the states in South-Western part of Nigeria. The states are: Oyo, Osun and Ogun States.

Sampling technique/procedure
Stratified random sampling technique was used for the selection of 1,800 respondents out of 2,620 representing 69 percent of the total population. However, random sampling technique was used for the selection of male and female subjects who took part in the study. The subjects were drawn from the junior secondary schools in Oyo, Ogun and Osun states in Nigeria. The division of each of the three states into three senatorial districts is the first level of stratification. After this, five schools were randomly picked from each of the senatorial districts using hat method. The number of schools picked from each state summed up to 15 while the total number of schools selected from the three states put together summed up to 45.

Forty (40) subjects were randomly selected from each school. This number multiplied by the total number of schools selected from the three states (45) gave 1,800 participants. The subjects were drawn from junior secondary school III (JSS III). The justification for opting for a fairly large sample of JSS III subjects is that a large representative sample in a study on creativity would help to eliminate individual differences and establish a trend in the sample. The age range for all the children who participated in this study was from 11-18 years. The mean age for the female respondents was 13.97 years while the mean age for the male respondents was 13.09 years. The mean age for all the respondents was 13.49 years. Out of the 1,800 subjects who participated, 810 and 990 were female and male respondents respectively.

Instrumentation
Two main instruments were used in collecting data for this study. They are:

a. Ibadan Creativity Assessment Scale (ICAS)
b. Creative Behaviour Determinant Scale (CBDS)

The Ibadan Creativity Assessment Scale developed and re-tested by Akinboye (2002) has 12 sub-scales. The first four sections or sub-scales (A-D) are self-rating scales. They measure ideative flexibility, creative originality, ideative fluency and creative motivation. Section A which consists of 21 items measures specially ideative flexibility, the respondents is required to indicate how closely or accurately the items describe his or her person. The scale is a ten-point likert-type which ranges from 0 to 9, with 9 as the highest score while 0 is the lowest. In other words, a score of 9 only indicates that the item describes the respondents most accurately while a scale value of 0 shows that it is highly unlike the person of the respondents. Section B which consists of 25 items measures creative originality. In section C, there are 25 items and the composite scores that emerge here is interpreted as a measure of ideative fluency. Section D consisting of 25 items measures creative motivation. Like section A, the scale values for section B, C and D are 0-9.

Creative Behavior Determinant Scale was developed by the researcher. The scale revealed how various factors determine creative behavior among the subjects used. The scale had five sections and each section contained some items in the form of simple statements to which the respondents were expected to indicate on a ten (10) point scale the extent to which they were descriptive of them. The rating power of the ten point scale was interpreted as follows:

0 = Totally unlike me
1 = Very much greatly unlike me
2 = Much greatly unlike me
3 = Greatly unlike me
4 = Less greatly unlike me
5 = Not sure
6 = Like me

7 = Much like me
8 = Very much like me
9 = Completely like me

Data collection process

Five research assistants who were baccalaureate External Degree research students were used for the administration of research questionnaires. The research proctors were provided prior training information as regards the administration of the instruments. Research questionnaires were administered and collected within forty five minutes.

Research question

This study will specifically answer the question below.
What is the joint contribution of the independent variables (environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure) to the prediction of creative behavior (dependent variable) among the subjects?

Results

The result of the study was considered on the research question raised above.

Table 1: Summary of Regression Analysis on Sample Data

Multiple R	*R^2*	*Adjusted R^2*	*Standard Error*
0.63234	0.39985	0.39852	72.70355

Table 2: Analysis of Variance (ANOVA)

Analysis of Variance	*DF*	*Sums of Squares*	*Means Square*	*f-Ratio*	*P*	*Remarks*
Regression	4	6321527.08283	1580381.77071	298.98592	<0.05	Significant
Residual	1795	9488023.11217	5285.80675			

Table 1 showed that the four factors namely: students' environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure correlate positively with the dependent measure, that is, students creative behavior (R= .632). This means that when talking about students' creative behavior, the four factors are quite relevant towards its determination.

Furthermore, an adjusted R^2 value of .399 obtained showed that 39.9% of the total variations in students' creative behavior is accounted for by the four independent variables taken together. The remaining 60.1% is due to other factors. The standard error of these estimates is 72.70355. Analysis of variance on table 2 revealed that the adjusted R^2 value was significant at 0.05. This showed that the adjusted R^2 value was not due to chance.

Discussion

This study investigated the joint contributions of the independent variables (environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure) to the prediction of creative behavior (dependent variable) among the subjects. Results from this study showed that significant relationship existed between students' creative behaviour and the environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure. The indication is that all the four factors have jointly influenced creative behavour of the students.

This result is consistent with the findings of some other researchers which showed that environment, attitudinal disposition of parents, attitudinal disposition of teachers and peer pressure when taken together, significantly influence students' creative behavior (Khaleefa, 2006; Sylvia, 2000; Whaley and

Henderson, 2003). This result was not surprising since certain authors like Peterson, (2008) and Perkins, (1995) earlier carried out researches and came up with the findings that each of the four factors when examined individually was found to have significant relationship with students creative behavior. The implication of this is that when talking about students' creative behavior the four factors are very relevant towards its determination.

References

Akinboye, J. O. (2002). Creativity: *An Approach to a Behavioural Theory*. Psychological Report, 42 (3), 119-126.

Alencar, B.I. and Rodrigues, S. O. (2008). *Relationship of the Ammons Quick Test of Intelligence to Verbal and Non-Verbal Tests of Creativity*, Psychological Reports, 52, 747-750.

Bouchard, J. J. (2003). *Twins-Natures Twice Told Tale*. Year Book of Science and the future, Chicago: Encyclopedia Botanica. 12(2), 66-81.

Bouchard, J. J. and Henderson, B.L. (2002). *Identifying Individual Differences in Creative Problem Solving Style*. Journal of Creative Behaviour, 24, 111-131

Casto, S. D., De Fries, J. C. Fulker, D. W. Plomine S. I. and Rende, S. A. (2005). *Multivariate Genetic Analysis of Wechsler Intelligence Scale for Children-Revised* (WISCR) Factors affecting Behaviour Genetics, 25 (1), 25-32.

Craighead, W. E., Kazdin, A. E., Mohaney, M. J. (1996). Behaviour Modification: *Principles Issues and Applications Boston*, Houghton, Mifflin.

Dubrin, A.J. (1981). Human Relations: *A Job Oriented Approach*. Reston, Virginia: Reston Pub. Coy. 7, 97-101.

Fleith, D. S. (2009). *Effects of a Creativity Training Programmes on Students at Normal School*. Unpublished Masters Thesis. University of Brazil, Brazil, 66-78.

Flynn, J. R. (2007) Massive I Q Gains in 14 Nations: What I Q Tests Really Measures, Psychological Bulletin, 101 (2), 171-191.

Horgan, J. (2005) *Get Smart Take a Test*. A Long Term Rise in IQ Score Baffles Intelligence Experts. Scientific American, November 2-14.

Khaleefa, O.H. (2006) *Gender and Creativity in an Afro-Arab Islamic Culture*: The Case of Sudan, Journal of Creative Behaviour, 30, 1, pp. 52-60.

Nwazuoke, I. A. (1996). Creativity, *Understanding Special Education*. Published for Special Education Research Group (SERG). (12), 1-22.

Nwokule, I.N. (1982) *Birth- Order, Creativity and Vocational Aspiration of Adolescents with Thematic and Analytic Cognitive Styles*. Unpublished M.Ed. Project. Department of Guidance and Counselling, University of Ibadan. 60-68.

Ott, Wechski, Torres and Polonia, (2009). Creativity: *Its Detection, Nature and Development in the Child*. Professional Education: A Book of Readings: Benin: Ethiopia Publishing Corporation. 1 (2), 17-33.

Perkins, D. (1995). Outsmarting IQ: *The Emerging Science of Learnable* Intelligence. New York Press 1 (6), 78-98.

Peterson, E. (2008). Http: www weekly reader comm./parents/articles/at p/ 120 asp.

Plomine, R. and Rende, R. (1991). Human Behavioural Genetics. In M. R. Rosenzweig and L. W. Porter (Eds.). Annual Review of Psychology, 42, 161-190.

Skeels, J. I. (2006). *The Creativeness of Life*. Harper and Row, 40 (3), 21-29.

Sylvia, R. (2000). Peer Influence htt pp www. Sylarimm comm../ peers, 2. Htm.

Whaley, R. and Henderson L. (2003). Http://www aceweb, org/jac/v78n3/783-1html.