World Journal of Innovative Research (WJIR)
ISSN: 2454-8236, Volume-11, Issue-1, July 2021 Pages 99-103

Determinants of School Counseling and Fathers' Occupation on Creative Domain of Basic Science Students in Ekiti State, Nigeria

Ajayi P. O. , Ajayi L, F., Oniya Toluwa

Abstract— **This study investigated determinants of school counseling and fathers' occupation on creative domain of basic science students in Ekiti State, Nigeria. The purpose of the study was to determine the influence that gender will have on creativity of basic science students in Ekiti State, Nigeria. The study adopted descriptive research design of the survey type. The population of this study consisted of 23,837 junior secondary school students in all the secondary schools in Ekiti State, Nigeria. The sample for the study consisted of 300 junior secondary school students in Science Colleges of Ekiti State. Purposive random sampling technique was adopted to select three government owned Science Colleges in Ekiti State putting into consideration the schools that are science based with students containing both male and female. Random Sampling Technique was adopted to select 100 junior secondary school students in each of the three science colleges selected. A total of 300 junior secondary school students chosen from the three Science Colleges comprising of 246 male and 54 female from JS1 and JSIII were selected. Two research instruments that were used are ;"School Counseling and Fathers' Occupation of Basic Science Students' Questionnaire (SCFOBSSQ)" which was self-constructed questionnaire containing 25 items and Creativity Domain Questionnaire (CDQ)" which was adapted from Kaufman et al. (2008) consists of 45 items that measures the creativity domain of students. The face, content and construct validity of the questionnaires were ensured through University professors who were experts each in Science Education, Guidance and Counseling, Vocational and Technical Education and Test Measurement and Evaluation. The reliability of the instruments was ascertained by using Cronbach's Alpha reliability Coefficient; this was used in order to ensure the internal consistency of the instruments and the values obtained were 0.78 and 0.89 for (SCFOBSSQ) and (CDQ) respectively. The instruments were administered to the respondents with the help of research assistants and the data collected was analyzed using descriptive statistics and the three hypotheses were tested at 0.05 level of significance. The result showed that there no significant relationship between school counseling and creative domain, that there is no significant relationship between father's occupation and creative domain, also that there is no significant relationship in the creative domain of boys and girlsamong Basic Science Students in Ekiti State.Based on the findings of the study, it was concluded that that among all the factors that alter the deposition of creative domain, fathers' occupation and school counseling have no predominant control on creativity among Basic Science Students in Ekiti State. Also that creative domain is independent to gender among Basic science student. It is therefore recommended that Seminar and workshops should be organized regularly for students to be exposed to various domain of creativity, parents and school administrators including counselors need to be encouraged in detecting the area of creativity of their students/ children in order for them to be encourage towards it and that gender sensitive tools or training should be discouraged during training of minds towards a certain area of creativity among students.**

Index Terms— **Fathers' Occupation, Creative Domain, School Counseling, Gender and Junior Secondary School Students.**

Ajayi P. O. (Ph.D), Department of Science Education, Faculty of Education, Ekiti State University, Ado-Ekiti, Nigeria
Ajayi L, F.(Ph.D), Department of Science Education, Faculty of Education, Ekiti State University, Ado-Ekiti, Nigeria
Oniya, Toluwa (Ph.D), Department of Science Education, Faculty of Education, Ekiti State University, Ado-Ekiti, Nigeria

I. INTRODUCTION

Science and technology play vital roles inthe development of any nation of the world most especially in the developed countries. This has helped countries such as Japan and United State to achieve their eminence in the production of automobiles in the world which also helped in sustaining their national development. Technology is therefore concerned with the application of scientific theories, rules and principles to practicallyfound solutions to the numerous problems in the society.

In Nigeria, at Junior Secondary School level, Integrated Science was one of the subjects which students must offer and pass in the Junior Secondary Certificate Examination (JSCE). This science subject which was offered as Integrated Science in Junior Secondary School has changed both in content and name. The content was broadened and the name changed from Integrated Science to Basic Science due to recent educational reforms in Nigeria (NPE, 2007).

Basic science is a preliminary and core subject at the level of junior secondary school of Educational system in Nigeria. The definition of Basic Science as it was given by Omiko (2005) as a subject which teachesscience concepts, rules and principles in holistically way to express the fundamental unity of scientific taught and avoiding premature or unnecessary tension in the differentiation among various fields of science. It presents science as a unified whole in order for learners to have a holistic view of the science subjects (Seweje&Jegede, 2012. The subject was introduced into the Universal Basic Education in Nigeria education system as a panacea for some of the difficulties facing science education especially at the level of junior secondary school. The knowledge of Basic science is necessary for individual to be scientifically trained in different areas of endeavor. The programme as stated in national policy on education emphasizes acquisition of skills and development of the spirit of enquiry as opposed to rote learning. It is also to develop acquisition of scientific attitudes rather than accepting scientific facts as a dogma (Adenike&Busayo, 2003).

According to the National Policy on Education (NPE, 2014) which specifies that aims of Basic Science which is directed at enabling students who are exposed to it, to acquire the following skills:

1. Observe thoroughly and carefully
2. Accurate report of what is observed.
3. Organization of information acquired
4. Careful generalization of the acquired information
5. Predicting as an effect of the generalization
6. Designing experiments to cross-check predictions.
7. Using models to describe phenomena appropriately
8. Continuing the process of inquiry when new data is not in conformity with predictions.

Creativity is the interaction among aptitude, process and environment by which an individual or group produces a perceptible product that both novel and useful as defined within a social context (Plucker, Begheto and Dow, 2004). Creative domain is a crucial component of human cognition that is related to the construct of intelligence; creativity refers to production of something new, although it can sometimes involve the recombination and modification of ideas. In education, definitions vary completely from new ideas and philosophies to new ways of considering and problems solving.

Creativity of a child is in line with career choice which can be obtained through self-rating or self-estimation. Such self-estimated creativity domain as related by Kaufman and Baer (2004) can be categorized under seven as: ***Artistic Verbal*** which is the creativity domain of individuals that perform very well in English literature, talking and argument, writing of friction and prose. Related vocations include secretariat studies. ***Artistic Visual*** which is also the creativity domain of individuals that performs very well in painting, sculpture, photography, filmmaking among others. ***Entrepreneur*** in a person is responsible for performance in management, selling, advertising, business and readership. ***Interpersonal relationship*** is a very strong, profound or close association among many people that may range in length from brief to enduring. , ***Mathematics and Science*** could be considered as areas of study which include subject like basic science, agriculture and mathematics. ***Performance,***which is the level of achievement of a given task measured against standardize accuracy, cost, completeness and speed.Related vocations include; Block laying and concreting/ Building, Motor Mechanic, Textile/ Garment Making e.t.c.***Problem solving*** includes application of theories, rules and principles from mathematics and science whichcould be gauge of individuals' critical thinking skills. Such individuals perform well in passing good judgment, logic reasoning, Mechanical abilities, proffering solutions to problems and so on.

However, creativity is a trait that must be possessed before people can become successful innovators. Major factors that can influence creativity include; career experience such as School counseling and gender (Jyung et al 2012).

School counseling is given to students in order that they can make professional preferences, lead to vocational choices through creativity by taking individual features or mental characteristics of students into consideration within the context of creativity domain counselling services in schools.

School counseling involves the staging or organization of counseling programmes in schools which could help students to determine their individual area of strength and weakness which could gear up their creativity. Counselors do present appropriate creativity intervention programmes for students in order to improve on their limited understanding to methodologies (i.e., attitude, beliefs and values) and poor skills in addressing their needs (Glenn, 2018).

School counseling encourages acquisition processes and adoption of strategies to address learning through creativity which include books on tape and other technological supports, as well as the acquirement of targeted learning and instructions (Reis, Mcguire, &Neu, 2000). Interests, talents and abilities could bemeasured and counselors can help in encouraging the use of other means during school hours and at home which could focuses on the advancement of students'creativity (strengths and talents). When instructorsassess the successful development and implementation of talents in students with confidence and hope, additional opportunities for success may occur for students especially in area of science in school which will improve their ability to solve societal problems.

School counseling progammes could indirectly encourages parents and the teachers in order to find rich opportunities that will eventually engage them positively, possibly making them to focus on mentorships as a result of independent study of their wards or students. This will eventually help students, parents and teachers to instruct higher-order for solving of problem and skills for processing of information.

Role of gender cannot be overestimated in creativity among science students, the cultural role expected of men and women in terms of occupation are known to be clearly defined. Studies on creative ability among secondary school students are not concluded with the view of influence of gender d (Runco et al. 2010, Pagnani 2011). Some of the studies reported that there is no significant difference between females and males in creativity among secondary school students and whereas others were posited with mixed findings that averagely, suggestive of higher level of creativity in females. Despite the general or common knowledge that females are more of creative in the area of verbal and artistic domains whereas males are also known to be more creative in the area of science and mechanical domains.

Another variable that could determine creativity among Basic science students could be fathers' occupation. Parents will have certain aspirations regarding their children's future in which it depends on the nature and the capacity through the occupation of parents especially the fathers who is the head of the family and caterer of the whole members of the family. Parents weave a lot of hopes and dreams about their children's future through his behavior towards children and may assume crucial importance in shaping their choice in life through their creativity process to determine their future. Musta'amal and Fatokun (2014) in a study carried out on choice of vocation (creativity) among children in Ekiti State Nigeria, posited that parents' influence on children is much more complex and prevalent than normally described, especially when it comes to creativity or choice of vocation.

Okeke (1996) studied the relationship between parental occupation and their children occupation preference and found that 60percent of the children were willing to take after their father's occupation. This eventually can influence their creativity from the talent deposited in them but towards their fathers' occupation which may make their creativity domain more stressful or difficult for them. Creativity could influence the adoption of essential choices for people in life which could include choice of partner, vocation, education and career.

Nowadays, people fail to make the right choice in make professional choices that can best be fit to their own ability by making their profession career through identification of status of a person they follow making them unsuccessful.Many scholars have noted that despite the set goals of education, there has not been an adequate curriculum to develop junior secondary school Basic Science students' creativity.

It is very important to base valuable researches such as determinants of school counseling and fathers' occupation on creative domain among students offering this subject because it is a core subject in the Universal Basic Education which is made free for all Nigerians. And from this level of education, there are diverse ways taken by Basic Science students; some pull out of school system as a result of poverty to find means of survival for themselves in the society, some take their choice of vocation either to go to the government Technical Colleges for training or locally as apprentices, many of them take their choice of class of study such commercial, art or science class in Senior Secondary Schools. The researcher observed that Basic Science students take up their choices without proper guidance programme that can help ascertain which choice they could make considering their creativity. This study therefore is sought to investigate the determinants of school counseling and fathers' occupation on creative domain of Basic Science students in Ekiti State, Nigeria.

II. Research Method

This research work is descriptive research design. The design was chosen because it involved collection and analysis of data so as to explain the surviving features regarding determinants of school counseling and fathers' occupation on creative domain of Basic Science students in Ekiti state, Nigeria. The population of this study consisted of 23,837 junior secondary school students in all the secondary schools in Ekiti State, Nigeria. The sample for the study consisted of 300 junior secondary school students in Science Colleges of Ekiti State. Purposive random sampling technique was adopted to select three government owned Science Colleges in Ekiti State putting into consideration the schools that are science based with students containing both male and female. Random Sampling Technique was adopted to select 100 junior secondary school students in each of the three science colleges selected. A total of 300 junior secondary school students chosen from the three Science Colleges comprising of 246 male and 54 female from JS1 and JSIII were selected. Two research instruments were used; the first instrument was a self-designed questionnaire titled "School Counseling and Fathers' Occupation of Basic Science Students' Questionnaire (SCFOBSSQ)**"**. The questionnaire had 25 items of a four-point likert-type scale with scoring system ranging from Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree =1which was used to collect data from the respondents. The second research instrument was titled " Creativity Domain Questionnaire (CDQ)" which was adapted fron Kaufman et al. (2008) consists of 45 items that measures the creativity domain of students under seven domains ; artistic visual, arstistic verbal, maths/Science,prenuer, problem solving, interpersonal and performance with measuring scale of ; very creative = 5, somewhat creative = 4, a little creative = 3. Not at all creative = 2 and not creative = 1. The two instruments were given to four University professors who were experts each in Science Education, Guidance and Counseling, Vocational and Technical Education and Test Measurement and Evaluation to be refined so as to meet face, content and construct validity requirement. The reliability of the instruments was ascertained by using Cronbach's Alpha reliability Coefficient; this was used in order to ensure the internal consistency of the instruments by administering the instrument on 20 students that will not partake in the research and the value obtained were 0.78 and 0.89 for (SCFOBSSQ) and (CDQ) respectively . The instruments were administered to the respondents with the help of research assistants who later collected it back from the respondent after they are done with it. The data collected was analyzed using descriptive statistics and the three hypotheses were tested at 0.05 level of significance.

III. Research Hypotheses

Three research hypotheses were postulated for the purpose of this work:

1. There is no significant relationship between school counseling and creative domain among Basic Science Students
2. There is no significant relationship between parental occupation and creative domain among Basic Science Students
3. There is no significant difference in the creativity of boys and girls among Basic Science student.

Hypotheses Testing and Results

Hypothesis 1

There is no significant relationship between school counseling and creative domain among Basic Science Students

In testing the hypothesis, scores regarding school counseling on (SCFOBSSQ) and (CDQ) of creative domain were subjected to statistical analysis of Pearson Product Moment Correlation. The result is presented as Table 1.

Table 1: Pearson Correlation between school counseling and creative domain among Basic Science Students in Ekiti State

Variables	N	Mean	SD	R	P value
School Counseling	300	3.77	.685		

Creative Domain	300	3.68	.327	.128	0.027

*p>0.05

Table 1 showed that there is no significant relationship between school counseling and creative domain among Basic Science Students in Ekiti State, Nigeria (r (300)= 0.128. p> 0.000). Therefore, the null hypothesis is accepted and this suggests that there no significant relationship between school counseling and creative domain among Basic Science Students in Ekiti State, Nigeria.

Hypothesis II

There is no significant relationship between father's occupation and creative domain among Basic Science Students in Ekiti State.

In testing the hypothesis, scores relating to father's occupation in (SCFOBSSQ) and (CDQ) of creative domain were subsequently subjected to statistical analysis involving Pearson Product Moment Correlation and the result is presented below in Table 2.

Table 2: Pearson Correlation of father's occupation and s among Basic Science Students in Ekiti State

Variables	N	Mean	SD	R	P value
Father's occupation	300	3.69	.723		
Creative Domain	300	3.68	.327	0.012	0.831

*p>0.05

Table 2 showed that there is no significant relationship between father's occupation and creative domain among Basic Science Students in Ekiti State. (r (300) = 0.012. p> 0.05). Therefore, the null hypothesis is accepted and this infers that there is no significant relationship between father's occupation and creative domain among Basic Science Students in Ekiti State, Nigeria.

Hypothesis III

There is no significant difference in the creative domain of boys and girls among Basic Science students

In testing the hypothesis, scores relating to the gender (boys and girls) on (CDQ) of creative domain were subsequently subjected to statistical analysis involving t-test. The result is presented below in Table 3.

Table 3: t-test of significant difference in the creativity of boys and girlsamong Basic Science Students in Ekiti State

Variables	N	Mean	SD	T	df	P-value
Boys	246	3.675	0.330			
Girls	54	3.687	0.314	0.248	0.831	0.804

*p>0.05

Table 3 showed that there is no significant relationship in the creative domain of boys and girlsamong Basic Science Students in Ekiti State, t (298) = 0.248, p> 0.05). Therefore, the null hypothesis is accepted. This implies that there is no significant relationship in the creative domain of boys and girlsamong Basic Science Students in Ekiti State.

IV. Discussion

The findings of the study indicated that there is no significant relationship between school counseling and creative domain among Basic Science Students. This could be as a result that school counseling seems to focus more on students' behavior and chosen of carrier. The findings is contrary to that of Bojuwoye and Mbanjwa (2006) who states that school counseling is an important factor in students' creativity. The findings is also contrary to the finding of Gladding, (2011) who posited that creativity is as a result of strong counseling relationship which allow for deeper communication between the school counselor and student.

The study showed that there is no significant relationship between father's occupation and creative domain among Basic Science Students in Ekiti State. This could be due to the low income wage or salary from the father's occupation. It is the opinion of the researcher that if ones father's occupation is of robust salary or income, this could attract the direction of their children's creativity. The finding of the study is contrary to that of Lehaman (1990) who explained that early peak of child's creativity is due to environmental factors such parents in good financial condition from their occupation which helps to satisfy the need of their children and eventually enhances their creativity.

The findings of the study also showed that there is no significant relationship in the creative domain of boys and girlsamong Basic Science Students in Ekiti State. It is the opinion of the researcher that higher level of inquiry spirit in male students supposed to trigger their level of creativity in male than the female students. The finding of the study is supported by the finding of Baer and Kaufman (2017) that gender has no influence on the creative performance between boys and girls. It is also in consonance by Eyo and Edect (2010) who claimed that boys were significantly more interested in outdoor activities such as mechanical and electrical doings which made their creativity to be more noticed than that of female.

V. Conclusion

Based on the outcomes of this study, it is therefore concluded that among all the factors that alter the deposition of creative domain, fathers' occupation and school counseling have no predominant control on creativity among Basic Science Students in Ekiti State. Also that creative domain is independent to gender among Basic science student.

VI. Recommendations

Base on the findings of this study, it is therefore recommended that;

1. Seminar and workshops should be organized regularly students to expose them to various domain of creativity where they can explore career opportunities.
2. Parents and school administrators and counselors

needs to be encouraged in detecting the area of creativity of their students/ children in order for them to be encourage towards it.

3. Gender sensitive tools or training should be discouraged during training of minds towards a certain area of creativity among students.

REFERENCES

[1] Adenike, E.E. &Busayo, B. O., (2003).Teacher Factors as Determinants of Achievement in Integrated Science.Journal of Science Teachers Association of Nigeria, 38 (1&2), 94-97
[2] Bojuwoye.O., &Mbanjwa, S., (2006).Factors Impacting on Career Choices of Technical Students from Previously Disadvantaged High Schools. Journal of Psychology in Africa (1) 3-16
[3] Eyo, E. B. &Edet, P. B. (2011). Gender and Occupational Preferences among high school students in Cross River State Nigeria. An International Multidisciplinary Journal, Ethiopia 5 (1) 327-341.
[4] Federal Republic of Nigeria (2014).Policy on Education 5th Edition.Lagos; National NERDC Press, Nigeria. (5th Edition)
[5] Federal Republic of Nigeria. (2004). National policy on education (4th Edition).Lagos: NERDC Press.
[6] Federal Republic of Nigeria. (2011). National policy on education (4th Edition).Lagos: NERDC Press.
[7] Gladding, S. T. (2011). The creative arts in counseling (4th ed.). Alexandria, VA:American Counseling Association.
[8] Jyung, U.Y., Kim, B.W., Song, B.K., Choi, D.S., Lee, J,B., Kim, E.S., Kim, B.K., (2012). Effect of Vocation Experience Activity on School Students' Career Development, Academic Motive, Elementary Creativity and sociality.Journal of Career Education Research, 25 (1) 52-66
[9] Kaufman, J.C., & Beer, J. (2004). Self-Sure, I' am Creative, But Not in Mathematics/! Self- reported creativity in diverse domain. Empirical Studies of the Arts, 22 (143-155)
[10] Lehaman, D.R. (1990) A longitudinal study of the effect ofundergraduate training on reasoning. DevelopmentalPsychology 26, 952-960.
[11] Newton, D. A., & Grayson, M.S., (2003). Trend in Career Choice by US Medical schools Graduates. Journal of the American Medical Association, 290 (9).
[12] Okeke, O. C., (1996). Women and Girl Participation in Science, Technology and Maths: Educators and Facilitators. A Lead Paper Presented at the 8th Conference of Nigeria Academic of Education. Enugu 19-21 November, in Zaria: Ahmadu Bello University Press.
[13] Omiko, D. (2015). Using cultural-based analogical concepts in teaching secondary school science.Model of a lesson plan.International Journal of Science and Technology Wducation Research. 2(1),1-5
[14] Pluncker, J., Begheto, R.A., & Dow, G., (2004). Why isn't creativity more important to educational psychology? Potential, Pitfall and Future directions in Creativity Research. Educational Psychologist, 39, 83-96.
[15] Ricks, L., Kitchens, S., Goodrich, T., & Hancock, E. (2014).The use of narrative therapyin individual and group counseling.Journal of Creativity in Mental Health, 9, 99-110. doi:10.1080/15401383.2013.870947
[16] Runco, M. A., (2014). Creativity: Theories and Themes: Research, Development and Practice. Elsevier
[17] Seweje, R.O. and Jegede, S.A. (2012): Science Education and Science Teaching Methods.a Comprehensive Approach. Ado-Ekiti. Atlantic Associated Publishers.