

**PERSONAL VARIABLES AND SECONDARY SCHOOL STUDENTS
CREATIVITY SKILLS IN AGRICULTURAL SCIENCES IN
AGRICULTURAL SCIENCE IN PUBLIC
SECONDARY SCHOOLS IN CROSS RIVER
STATE, NIGERIA**

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Abstract

The study on personal variables and secondary school students' creativity skills in agricultural sciences in public secondary schools in Cross River State, Nigeria. The research design adopted was the correlational survey research design. It is a design that allows the researcher to assess the situation under investigation as it exists presently and establish the relationship between the variables. The population of this study consisted of all SS3 students in all the public secondary schools in Cross River State, Nigeria. Data obtained from the Cross River State Secondary Education Board indicates that there are 55,285 SS3 students in 264 public secondary schools across the eighteen (18) local government areas of Cross River State. Stratified and simple random sampling techniques were adopted for the study. Therefore, eleven percent (11 %) of three thousand six hundred and fifty-five (3655) SS3 students were randomly selected and used for the study, from each of the sampled schools. The research instruments for this study are a questionnaire tagged "Family, Personal Variables and Students' Creative skills in Agricultural Sciences Questionnaire (FPVSCQ). The initial draft of the instrument for the study, Family, Personal Variables, was given to experts in Guidance and counselling and the measurement and evaluation department of the University of Cross River State. This was to ensure that the items in the questionnaire were relevant, clear and concise in both content and face validity. The comments and remarks from these experts were very useful in revising the instrument. After the administration, the result of trial testing was used to calculate the reliability of the instruments using Cronbach's alpha reliability; the reliability value range of .71 to .79 was obtained. Based on the result, the instrument was considered high enough to justify the reliability and suitable for use in the study.

Keywords: Personal Variables Creativity Skills & Agricultural Sciences

INTRODUCTION

Education is a tool that promotes creative skills in Agricultural Sciences and development in society. The difference between developed and developing economies is the quality of education provided, with the primary essence of producing people (men and women) with creative skills in



Agricultural Sciences in different fields to drive the development of the place. The Nigerian curriculum, from its inception, has been tailored to train students in reading, writing, and solving some arithmetic. Okwulanya (2013) over time, graduates from Nigeria's secondary schools find it difficult to get a job or become useful to themselves and the nation. Unlike the developed economy, the curriculum is drawn to cover a wide spectrum of knowledge and creative skills in Agricultural Sciences. The need to promote quality and creative skills in Agricultural Sciences in the education system at the secondary school level is responsible for the introduction of pre-vocational subjects like Cultural and Creative Arts, Music, Home Economics, Agricultural Science, Physical and Health Education and Computer Studies. This effort has been sustained even though the practical aspect is given less attention in teaching these subjects.

The 9-3-4 system at the secondary school level is geared towards, not only, the theoretical concepts, but, application of appropriate skills required in the development of Arts, Science and Technology for the survival of individuals in Nigeria. Consequently, the reason why some Nigerian students are retrained before being considered, fit, for employment is that, they have been found to possess little or no creative skills in Agricultural Sciences to cope with the numerous challenges they may face in the course of their work. It means, therefore, that, graduates who are not creative or are not driven by creative tendencies cannot contribute to the growth and development of the nation. Thus, the average Nigerian student needs retraining to face the challenges of the workplace. This fact challenges one to find out the factors that may influence creative skills in Agricultural Sciences. The home environment of the child is another factor that may influence students' creative skills in Agricultural Sciences in Cross River State. The kinds of environment the child or children grow up in determine whether or not they will be creative or not. The home environment can make or mar the success and creative skills in Agricultural Sciences. The kinds of people the child relates with and the resources available to the child will help to transform or deform the child. Obviously, what the child becomes in the future is determined by the environment. The environment is very influential in the transformation or destruction of the child.

Oyundoyin and Olatoye, (2017) observed other personal variables that may also influence creative skills in Agricultural Sciences of students in secondary schools, including: students' interest in schooling, students' self-efficacy, students' self-concept, and students' attitude towards schooling. These are factors within the child which are essential in provoking the creative skills in Agricultural Sciences. The higher a student's interest in a chosen field of endeavour, the higher his or her commitment and engagement to succeed. Nwosu and Maduewesi (1980), on the other hand, students who believe in themselves, their self-worth, have positive feelings about their ability and are determined to succeed, would put in everything, including their thoughts, and would succeed, no matter the challenges and hurdles. The student with a positive mindset to succeed will do all that is within his or her reach to get to the top. Similarly, students with a negative attitude about success will do little or nothing to become successful. In fact, students with low or negative interest, self-concept, self-efficacy and attitude are associated with low creative skills in Agricultural Sciences.

From the foregoing, it is evident that family and personal factors can either foster or serve as barriers to students' creative skills in Agricultural Sciences. This is with the view to discovering those qualities that help the individual to thrive in the area of creative skills in Agricultural Sciences. Usually, inventions, innovations, and problem-solving begin with the individual creative



skills in Agricultural Sciences. Given that the factors mentioned earlier are linked to student creative skills in Agricultural Sciences. The research is therefore geared toward family, personal variables, and secondary school students' creative skills in Agricultural Sciences.

Statement of the problem

The problem with our educational system is that student is not taught in a way that enhances creative thinking. Moreover, the assessment procedures do not reward students' creative skills in Agricultural Sciences. An average student should have possessed certain attribute require to be creative, develop passion and commitment for fresh way of looking at things, have understanding of people, entrepreneurial willingness to take risk and work hard, get ability to convince people that, new idea is good or better, becoming sensitive to problems, deficiencies, gaps in knowledge, as well as identifying, searching for solutions and always think out of box. It is regrettable that, majority of students could not make or bring into existence something new, whether a new solution to a problem, a new method, devices or a new artistic object or form. This made them unable to live up to the expectation of contributing meaningfully to society; rather, they became miscreants in society. Moreover, students who do not want to further their education lack employable and creative skills. Families cultivate a ready sense of humour in the student description of their experiences, both real and imaginary, with genuine interest to boost students' creative skills in Agricultural Sciences. Equally, the school assumes the obligation to nurture these creative skills in Agricultural Sciences within each student and aid the students to increase their creative skills, as well as to bring forth what is within them to express what is embedded in them. To encourage students' creative skills in Agricultural Sciences, the government of Cross River State has improved in terms of swift payment of some stipends for teachers whose students perform well. Also, it rewards the best performing students in various subjects in external examinations yearly. All these are aimed at motivating students' creative skills in Agricultural Sciences so that students will be self-reliant, independent and relevant in society.

Despite all these efforts and other good gestures by the Government, parents, educationalists, and even teachers themselves still complain about students' lack of creative skills in Agricultural Sciences, which manifests in students' not having the ability to create something new through imaginative skills. Thus, students cannot be self-employed due to the non-possession of relevant basic knowledge and a lack of mental process involving the generation of new ideas to solve problems. It is as a result of this that the researcher is interested in finding out the extent such as family and personal variables influence secondary school students' creativity skills in Agricultural Sciences in Cross River State, Nigeria.

Purpose of the study

This study examines the influence of family, personal variables and secondary school students' creative skills in Agricultural Sciences in Cross River State, Nigeria. Specifically, this study seeks to;

1. Examine the influence of parents' educational background on secondary school students' creative skills in Agricultural Sciences.
2. Determine the influence of parents' socio-economic status on secondary school students' creative skills in Agricultural Sciences.

Research questions



The following research questions are poised to guide the study.

1. To what extent does parents' educational background influence secondary school students Creative skills in Agricultural Sciences?
2. How does parents' socio-economic status influence secondary school students' creative skills in Agricultural Sciences?

Statement of hypotheses

The following hypotheses are posed to direct the study:

1. Parents' educational background does not have any significant influence on secondary school students' creative skills in Agricultural Sciences.
2. Parents' socio-economic status does not have any significant influence on secondary school students' creative skills in Agricultural Sciences.

LITERATURE REVIEW

The literature review was conducted based on the variables of the study. Thus:

- i Parents' educational background and students' creative skills in Agricultural Sciences.
- ii Parents' socio-economic status and students' creative skills in Agricultural Sciences

Parents' educational background and students' creative skills in Agricultural Sciences.

Creative skills in Agricultural Sciences are the act or ability to create something new through imaginative skills. It is a mental process involving the generation of new ideas. Creative skills in Agricultural Sciences are finding concepts or associations between existing and new concepts or re-arranging what is known to find out what is not known. The creative process takes place in the thought. Creative thinking has two aspects: Divergent Thinking (intellectual ability to think of many original, diverse and elaborate thoughts) and Convergent Thinking (intellectual ability to logically evaluate critique and choose the best ideas from a selection of ideas). It was initially felt that only gifted or special people could be creative.

Research has proved that only certain attributes are required to be creative (Oyundoyin & Olatoye, 2017). A creative person requires passion and commitment; a fresh way of looking at things; an understanding of people and an entrepreneurial willingness to take risks and work hard, ability to convince people that a new idea is good or better. Creative skills in Agricultural Sciences is fostered or inhibited by certain environmental pressures. Creative skills in Agricultural Sciences is the ability to make or bring to existence something new, whether a new solution to a problem, a new method or device or a new artistic object or form. Penick (2012), described creative skills in Agricultural Sciences as a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements and disharmonies as well as identifying, searching for solutions, making guesses or formulation of hypotheses, and possibly modifying and restating them, and experimenting to find results and finally communicating the results. Nwazuoke, Olatoye and Oyundoyin (2012), argued that, an environment where a child finds himself or herself could foster or inhibit creative skills in Agricultural Sciences. Though a child may have the innate or genetic



ability for creative skills in Agricultural Sciences, parents and teachers have roles to play to enhance and foster the creative traits. Dingledine (2013), asserted that family support, availability of learning materials and social pressures are some of the factors that influence the development of creative skills in Agricultural Sciences. From these findings, it is clear that, if teaching, assessment and social environment do not support creative thinking, the innate tendency in learners to be creative may be subdued.

Azonuche (2021), conducted a study on the Influence of Family Background on the Academic Performance of Married Female Students in Clothing and Textiles in Nigeria's Universities. The study aimed to find the influence of the family on the academic performance of married female students in Nigeria's tertiary institutions. The study was guided by three research questions and three hypotheses. The population of the study was 176 Clothing and Textiles students in public universities South-South States, Nigeria. The sample size was 58 respondents that are married, selected through purposive sampling technique. Questionnaire was used to elicit responses from the respondents. The records of students' raw scores were used to score performance. Data were analysed using mean, regression and ANOVA. Findings showed that the married female students perform their family roles. Their marital roles and family size did not influence their academic performance but their socioeconomic status did. It was recommended that families should provide needed learning materials for married female students for better academic performance

Family background is determined by family social economic status, family size and type, educational background, among others. Family socio economic status involves the amount of monetary resource available to meet the student's needs. This influences their behaviour, life aspiration and goal (Ojo & Yilma, 2010). Family size is linked to married students' academic performance such that it determines the amount of care and attention members receive (Nweke, 2018). The academic and family demands faced by married student impact on performance in schools (Usman, 2012). Most of them find it difficult to reconcile their marital roles and academic activities which require commitment. It is anticipated therefore these students would experience higher role conflict which are not favourable for academic work. For the students to perform well in class, she needs to have the diligence, determination and perseverance to scale over the hurdles in front of her while in school. Their participation in school often times results in role conflicts which influence their academic performance, thus corroborating the view of Kearn (2010), who posited that student's marital roles are instrumental to their academic performance.

Studies have shown that finance, nature of subject and attitude of students affect the poor academic performance of students in Home Economics, Agriculture science and even other discipline like (Imonikebe, 2012; Olueh, 2012). It has been found that students from the high socio-economic background has some advantages over the less privileged school mates as far as academic development and performance are concerned (Okonmah, 2010).

Ojo and Yilma (2010), showed that students from low socio-economic background perform poorly in school due to lack of adequate school materials for learning. Family size of a married female student can make or mar the realization of her ability and potentials. Another study of family size is positively related to academic conflicts suffered by the students in the school (Nweke, 2018). Basically, academics pose difficulties and stress on the single students let alone the married who are not caring for only their personal academic problems but face the challenges



of meeting the large family demands. Osia (2015), found stress and responsibilities on student mother negatively related academic accomplishment and practicability in academics.

Parents' socio-economic status and students' creative skills in Agricultural Sciences .

According to Jeynes (2012), the socio-economic status (SES) of a child is most commonly determined by combining parents' educational level, occupational status, and income level. Social class and economic status of the parents' determine the type of school and the standard of training they desire for their children. The occupation or profession of the parents, the educational level and whether the mothers are working or non-working mothers places them at an advantage or disadvantage to evaluate their children's academic work and monitor their progress. Status is often determined by the individuals' economic attainment, though it is sometimes ascribed on the individual. Okunniyi (2014), identified three distinct socio-economic groups or statuses which are common in many countries. They are: upper class- which is made up of rich business men and top government officials among others; middle class which consists of skilled workers, professionals and middle ranked government workers and the lower class- which is made up of manual workers, petty traders and low income government officials.

Francis (2017), opined that the lower income families may be aware of the importance of education in the society, but at the same time, they are also aware of their limited resources to measure up with such educational demands. According to the author, a family that can scarcely provide for the basic needs of the family which include food, shelters and clothing will hardly motivate the academic excellence of their children, instead they will pressurize their children to seek for job opportunities with the little education they acquired so far to support the family. The agreement implies that some families are likely to give their children a poor academic background because of a lack of financial support.

Ezewu (2014), said that the socioeconomic status of parents affects children's education and particularly academic achievement in the following ways: The degree of importance which each family attaches to schools, financial expenditure, including fees, textbooks and other equipment and facilities available at home. A well-to-do family will have a positive interest in the education of their children not minding whether the child is brilliant or not. This will force parents to see to it that the materials needed are provided for the child with the available resources. Parents will be able to pay children's school fees on time, and buy textbooks and other equipment that will help to enhance the child's academic achievement. Ezewu (2014) further explained that children from a high socioeconomic status leave secondary school between 10, 11 and 12 years of age, while those of low socioeconomic status leave primary school between 13, 14 and 15 years. This shows that the achievement of students in secondary school depends on their parental socioeconomic background. The availability of facilities such as tables, chairs, light and well well-conducive learning environment at home does help the child to learn better. All these should be present at home with the help of available resources. Macfarland (2013), in his book analyzed the chance of placement of children from middle or working-class and lower-class families in a comprehensive high school and modern secondary school. He found out that 72 percent of children from families of lower class against twenty-eight percent (28%) of children from the middle class, were placed in Comprehensive High School. He also found out that 10 percent of children from families of the lower class, against 90 percent of children from middle class, were placed in Modern Secondary School based on intelligence quotient

RESEARCH METHODOLOGY

The study was on personal variables and secondary school students' creative skills in agricultural sciences in agricultural science in public secondary schools in Cross River State, Nigeria. The research design adopted was the correlational survey research design. It is a design that allows the researcher to assess the situation under investigation as it exists presently and establish the relationship between the variables. The population of this study consisted of all the SS3 students in all the public secondary schools in Cross River State, Nigeria. Data obtained from the Cross River State Secondary Education Board indicates that there are 55,285 SS3 students in 264 public secondary schools across the eighteen (18) local government areas of Cross River State. Stratified and simple random sampling techniques were adopted for the study to select the subjects for the study. Therefore, eleven percent (11 %) of three thousand six hundred and fifty-five (3655) SSS 3 students were randomly selected and used for the study, from each of the sampled schools. The research instruments for this study are a questionnaire tagged "Family, Personal Variables and Students' Creative skills in Agricultural Sciences Questionnaire (FPVSCQ). The initial draft of the instrument for the study, Family, Personal Variables, was given to experts in Guidance and counselling and the measurement and evaluation department of the University of Cross River State. This was to ensure that the items in the questionnaire were relevant, clear and concise in both content and face validity. The comments and remarks from these experts were very useful in revising the instrument. After the administration, the result of trial testing was used to calculate the reliability of the instruments using Cronbach's alpha reliability; the reliability value range of .71 to .79 was obtained. Based on the result, the instrument was considered high enough to justify the reliability and suitable for use in the study

RESULTS AND DISCUSSIONS

Presentation of results

The result emanating from the hypotheses tested and the interpretation of findings, including a discussion of the outstanding results of the study, are presented in this chapter.

Hypotheses one

Parental educational background does not have any significant influence on secondary school students' creative skills in Agricultural Sciences. The major independent variable in this hypothesis is parent educational background, categorised in terms of primary education, secondary education and tertiary education. While the dependent variable is creative skills in Agricultural Sciences. To test this hypothesis, one-way analysis of variance was adopted with parental education as a factor and students' creative skills in Agricultural Sciences in terms of (preparation, incubation, insight, evaluation and elaboration) as dependent variable. The F-ratio test was employed to test the significance of the main influence, while Fisher's Least Significant Difference Test (LSD) was employed to as a Post-hoc Test. The result of the analysis is presented in Table 1.

Table 1
One-way ANOVA of the quality of the parental educational
Background and creative skills in Agricultural Sciences

Parental education	N	$\bar{X}$	Std. D	Std. Error
Primary education	85	16.6588	4.10735	.44550
Secondary education	167	17.7305	2.29834	.17785
Tertiary education	143	17.5105	2.06537	.17271

	395	17.4203	2.74382	.13806	
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	66.524	2	33.262	4.497	.012
Within Groups	2899.714	392	7.397		
Total	2966.238	394			

*p<.05

The first part of the analysis in Table 1 shows the descriptive statistics of the three levels of parental education with 395 respondents used in the study primary education has 85 respondents with mean, standard deviation and standard error of 16.6588, 4.10735 and .44550, parents with secondary education are 167 with mean, standard deviation and standard error 17.7305, 2.29834 and .17785 and for those with tertiary education are 143 with mean, standard deviation and standard error of 17.5105, 2.06537 and .17271 respectively. The inferential statistical analysis revealed that the calculated p-values of.012 accompanied by an F-value of 4.497 at.05 level with 2 and 392 degrees of freedom. The null hypothesis is rejected. This means that parental educational background significantly influences secondary school students' creative skills in Agricultural Sciences.

Hypotheses two

Parental socio-economic status does not have any significant influence on secondary school students' creative skills in Agricultural Sciences. The major independent variable in this hypothesis is parent educational background, categorised in terms of high, moderate and low. While the dependent variable is creative skills in Agricultural Sciences. To test this hypothesis, one-way analysis of variance was adopted with parental socio-economic status as a factor and students' creative skills in Agricultural Sciences in terms of (preparation, incubation, insight, evaluation and elaboration) as the dependent variable. The F-ratio test was employed to test the significance of the main influence, while Fisher's Least Significant Difference Test (LSD) was employed to as Post-hoc Test. The result of the analysis is presented in Table 2.

Table 2
One-way ANOVA of quality of the parental socio-economic status and creative skills in Agricultural Sciences

Agricultural Sciences					
Parental socio-economic status	n	$\bar{X}$	Std. D	Std. Error	
High socio-economic status	87	17.1412	4.51757	.49000	
Moderate socio-economic status	99	17.8812	2.54278	.25302	
Low socio-economic status	209	17.5072	1.99788	.13820	
Total	395	17.5241	2.85723	.14376	
	Sum of				
Sources of variation	Squares	df	Mean Square	F-value	p-value
Between Groups	25.402	2	12.701	1.560	.211



Within Groups	3191.11 9	392	8.141
Total	3216.52 2	394	

p>.05

The first part of the analysis in Table 2 shows the descriptive statistics of the three levels of parental socio-economic status with 395 respondents used in the study high has 87 respondents with mean, standard deviation and standard error of 17.1412 4.51757 and .49000, with moderate are 99 with mean, standard deviation and standard error 17.8812, 2.54278 and .25302 and for those with low are 209 with mean, standard deviation and standard error of 17.5072, 1.99788 and .13820 respectively. The inferential statistical analysis revealed that the calculated p-values of.211 accompanied by an F-value of 1.560 at.05 level with 2 and 392 degrees of freedom. The null hypothesis is retained.

Summary

Studies by many researchers have shown that there are factors that foster creative skills in students in Agricultural Sciences. Such factors that nurture creative skills in Agricultural Sciences in students include parents' educational background, parents' socio-economic status, students' home environment, students' interest in schooling, students' self-concept, students' self-efficacy, and students' attitudes towards schooling. Family variables such as family educational background may influence creative skills in the Agricultural Sciences of the learners. Well-educated parents produce children who strive to become successful in life. In the same way, the children benefit immensely from their parents' educational success because the parents who are educated will help them to achieve their dreams and become whatever they aspire to become. The reverse, therefore, will be the case of the child who is from a family whose parents are uneducated. In summary, students' creative skills in Agricultural Sciences in secondary schools are parent's socio-economic status. A parents' socioeconomic status refers to the parents' income, often measured within a year. A family's socio-economic status is essential because it is a determining factor or predictor of a family's success and achievement. In the school and at home, the child or children from a wealthy family are provided with several opportunities to engage in a variety of platforms that would enable them to advance knowledge and achieve more than expected.

Recommendations

The following serves as recommendations for the study

1. Parents should be encouraged to be educated. This is because parents' education and involvement are crucial. After all, they directly improve students' academic performance, attendance, behaviour, and self-esteem by fostering a supportive learning environment at home and creating strong school-home partnerships.
2. Family income has a significant positive influence on student outcomes; thus, parents should be encouraged to be self-employed, as higher incomes often enable greater investment in educational resources and opportunities, leading to improved academic performance and educational attainment.

Implications of the Study to Teachers of Agricultural Science



Agricultural science teaching is highly relevant for ensuring global food security, economic sustainability, and environmental stewardship by teaching essential skills, fostering innovation, and promoting responsible practices for a growing world population. It cultivates informed consumers and producers, equipping students with the knowledge to understand food systems, make sound nutritional choices, and pursue diverse careers within the booming agriculture and agribusiness sectors. Thus, the role of an agricultural science teacher is to educate students on agriculture, food, and natural resources, fostering critical skills in science, math, leadership, and technology, while promoting sustainable practices.

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