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Full Length Research Paper

Socio psychological factor as a panacea to students' Acquisition of Forest Plantation Establishment Skills in Federal Colleges of Forestry in Nigeria

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Abstract

This study focused on the influence of students' variables gender, age, father's highest qualification, mother's highest qualification, father's occupation, mother's occupation, career choice, students' attitude and school location (psychological factors) on students' forest plantation establishment skills. This was with the objective of understanding the influence of the nine variables on students' forest plantation establishment skills. The study is a correctional survey type. Census approach was used to include all year two National Diploma students of Federal College of Forestry, Jos (144) and Federal College of Forestry, Ibadan (238), (328) considered as the sampled size of the study. Two instruments used to collect data for this study include: Forest plantation establishment skills acquisition rating scale (r=0.83), and Students' Questionnaire having students' demographic variables, students' attitude to forestry education (r=0.88) and factors that motivate student's choice (r=0.80). Data collected were analysed using multiple regressions analysis. The nine variables collectively and significantly predicted Students' forest plantation establishment skills ($R=0.425$, $F_{(9, 372)} = 12.072$) and accounted for 16% of the explained variance. The relative contribution of each variable shows that only four variables gender (β = -0.279), age (β = 0.170), students' motivation to career choice (β = 0.173) and students' attitude (β = 0.133) contributed significantly to Federal Colleges of Forestry students' forest plantation establishment skills. It is therefore recommended that all these factors should be considered while designing or reviewing policy decisions on students skill acquisitions in colleges.

Key words: Forest plantation establishment skills, National diploma, Federal Colleges of Forestry

Introduction

The need for forest can be said to be as old as mankind. This arose out of forests being invaluable and indispensable natural resources which satisfy a wide range of human needs. According to Garg and Garg (2006) forests are the most important resources of nature on earth after air and water. To ensure the sustenance of forest resources it is imperative to train professionals in forestry and allied disciplines, hence, the need for Forestry Education. Forestry Education is meant to equip the students with technical knowledge and skills in forestry and allied discipline. Forestry Education deals with the study and management of natural resources associated with the forest environment. This fact is supported by Bandyopadhyay, (2008), who stated that Forestry Education prepares the student to acquire technical knowledge and management skills in forestry and its related fields. It is therefore, an aspect of education which leads to acquisition of practical skills and basic knowledge in area of forestry and agriculture. Forestry education is offered in universities and technical and vocational institutions in Nigeria. Federal College of Forestry, Ibadan and Federal College of Forestry, Jos offer technical and vocational training in forestry education.

Technical and Vocational Education and Training (TVET) refers to those aspects of educational process involving, in addition to general education, the study of technologies and related sciences and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (Federal Republic of Nigeria (FRN,2013). This means that the main goal of technical and vocational education and training in Nigeria in technical colleges such as Federal College of Forestry is to prepare students for the task (labour market) through acquisition of skills such as farm establishment skills. It is on the basis of the recognition of the importance of these skills that Federal College of Forestry stated in

their objective that they provide the students with the skills of how to establish forest plantations (FCF, 2017). According to Ubong and Oguuzor (2007) practical skill acquisition is the process of obtaining knowledge of technical and practical nature from an individual, group or institution that can impart such knowledge. This acquisition of skills will prepare the individual to fit in readily to employment or become self employed.

Skill acquisition is considered very important because that determines how successful and productive a person will be in the work place as well as compete favourably within the context of globalization. However, skill acquisition has become source of concern to researchers especially as the academic performance of the students is declining (Egbule 2004 and Ugoji 2008). Over the years, researchers have revealed that academic achievement has numerous determinant factors ranging from students interest (Udegbe, 2009), teaching methods (Eniayeju, 2010), Age (Ebenuwa-Okah 2010), School entry modalities (Olayemi, 2009). The acquisition of skills such as forest plantation establishment skills can be attributed to some factors such as the characteristics of the students. For instance, Abubakar and Oguguo (2011) in their study on age and gender as predictor of academic achievement of college of mathematics and science students reported that age and gender predicted the students' academic performance. Jones and Larke, (2001) also attributed students' academic achievement to gender. Dayıoğlu, and Türüt-Aşik (2004) similarly, discovered that females excel in their studies and performed better than their male counterparts among undergraduate students in a large public university in Turkey. Grissmer (2003) also stated that parents' level of education is the most important factor affecting the academic achievement of students. Similarly, Musgrave (2000) reported that a child that comes from an educated home would like to follow the steps of his/her family and by this, work assiduously in his/her studies. Again, Kissan (2006) stated that location of school influences the performance of the students in some subjects. Attitude is another variable that have been reported to affect student achievement as corroborated by Awolola, 2009. Zekele 2001. A student's level of acquisition of this forest plantation establishment skill may be a function of his or her personal characteristics. This study therefore, focused on the extent to which gender, age, father's highest qualification, mother's highest qualification, father's occupation, mother's occupation, career choice, students' attitude and school location influence students' farm establishment skills acquisition. To achieve this aim the following research objectives were stated.

1. To determine the extent to which students characteristics jointly predict students acquisition of farm establishment skills
2. To determine the extent to which students characteristics independently predict students acquisition of farm establishment skills

Methods

Research Design

The study adopted a correction survey type using multiple prediction method. There is no manipulation of variable as they have already occurred.

Population and Sample

The population for this study comprised all National Diploma (ND 2) students (2013/14 set) of Federal Colleges of Forestry. Census approach was used to select all year two National Diploma students from the two colleges considering the size of population of the students. A total of three hundred and eighty two (382) students comprising two hundred and thirty eight (238) students from Federal College of Forestry, Ibadan and one hundred and forty four (144) from Federal College of Forestry, Jos. Two instruments were used for collection of data they include

Data Collection

Two instruments used to collect data for this study include:

1. *Students' Questionnaire* (SQ)

This instrument was used to collect information from the students. The questionnaire had three sections A, B and C. Section A is made up of the student's demographic variables, e.g. name of school, gender, age, among others. Section B which consists of twenty (20) items was adapted from Salami and Salami (2013) to measure factors that motivate student's choice of the course of study. Section C was developed by the researcher and comprised of twenty (20) items used to elicit information from students on their attitude towards forestry and agriculture courses. The instrument was pilot tested on fifty (50) students of Federal College of Agriculture Moore plantation, Ibadan, Oyo state. Lawshe Content Validity (CVI) was used to establish the content validity and the value obtained was 0.80. While the internal consistency and reliability of the instrument was established using Cronbach Alpha giving the value of 0.88.

2. *Forest plantation Establishment Skill Acquisition Rating Scale*

This instrument was developed by the researchers with the help of some experts in the field. The instrument consists of two sections A and B respectively. Section A provided information on the students' background. While section B contained seventeen (17) items used to rate the students based on their farm establishment skills. The items in sections B are on a 4 point scale of 1= Poor, 2= Fair, 3= Good and 4= Excellent. The psychometric properties of this instrument were also determined; the content validity of the instrument was established using Lawshe Content Validity Index (CVI), which gave a value of 0.75, while the internal consistency and reliability of the instrument was

established using Cronbach Alpha giving the value of 0.83 using a sample of fifty (50) students that were not included in the study. The instructors taking the practical classes in the farm with the researchers rated the students using the instrument. The ground rules for rating the students were agreed upon during, students who, to no extent carried out the activities were rated poor, those who, to an extent carried out the activities were rated fair, while those who to a reasonable extent carried out the activities were rated good and those who to a large extent carried out the activities were rated excellent. Data obtained were analysed using multiple regression.

Data Analysis

Data collected were analyses using multiple regression.

Results and Discussions

Table 1: Inter-Correlation Matrix of the Predictor Variables and the Criterion Variables

VARIABLE	Gender	*Age*	FHQ	MHQ	FOC	MOC	CAR	ATTI	SL	EST
Gender	1									
Age	0.048	1								
FHQ	0.031	-0.002	1							
MHQ	0.083	0.016	0.622*	1						
FOC	0.036	0,018	0.416*	0.233*	1					
MOC	-0.056	-0.012	0.322*	0.233*	0.333*	1				
Career	-0.108*	0.016	-0.060	0.063	-0.029	-0.024	1			
Attitude	0.083	0.034	0.208*	0.263	-0.023	-0.181*	0.252*	1		
SL	-0.131*	-0.070	-0.182*	-0.283*	-0.006	0.135*	-0.185*	-0.799	1	
EST	-0.282*	0.164*	-0.076	0.075	-0.062	-0.065	0.240*	0.152*	-0.110*	1

Keys: GNR-Gender, FHQ-Father's highest qualification, MHQ-Mother's highest qualification, FOC-Father's occupation, MOC-Mother's occupation CAR- Career choice, SL-School location, EST-Establishment Skill

Table 1 showed that there was weak relationship between each of the students' characteristic. This indicated that there was no multicollinearity between students' characteristics.

Objective 1: To determine the extent to which students characteristics jointly predict students' acquisition of forest plantation establishment skills.

Table 2: Multiple regression analysis of students' variables on students' establishment skills

Model	Sum of Square	DF	Mean Square	F	Sig
Regression	1579.193	9	175.466	9.096	.000
Residual	7175.679	372	19.289		
Total	8754.872	381			
R = 0.425					
R^2 = 0 .180					
Adjusted R^2 = 0.161					

Table 2 showed that the combination of the predictor variables which are the students' variables(i.e. gender, age, father's highest qualification, mother's highest qualification, father's occupation, mother's occupation, career choice and students' attitude and school location) and the criterion variable which is students' establishment skill; is effective in predicting students' establishment skills ($F(9, 372) = 9.096$, $p < 0.05$). The multiple correlation coefficients (R) of all the combined predictor variables ((i.e. gender, age, father's highest qualification, mother's highest qualification, father's occupation, mother's occupation, career choice and students' attitude) with students forest plantation establishment skills acquisition is 0.425. The adjusted R^2 which estimates the variance accounted for by the combined predictor variables and criterion variable is 0.161. This means that all the predictor variables contributed to 16% of the variance in students' forest plantation establishment skills. This is an indication that students socio psychological factor jointly have positive impact on plantation establishment skills of Forestry students.

Objective 2: To determine the extent to which students characteristics independently predict students' acquisition of forest plantation establishment skills.

Table 3: Relative contribution of students' variables on students' establishment skill

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	44.387	3.153		21.765	.000
Gender	-2.678	.461	-.279	-5.816	.000
Age	1.196	.332	.170	3.637	.000
Father's highest qualification	-.112	.213	-.035	-.545	.586
Mother's highest qualification	-303	.227	-.083	-1.309	.191
Father's occupation	.040	.215	.010	.196	.845
Mother's occupation	-.089	.237	-.020	-.379	.705
career_choice	.111	.032	.173	3.472	.001
Student's_attitude	.051	.031	.133	2.861	.004
School location	-.219	.757	-.023	-.290	.772

*p < .05

Table 3 showed that there are relative significant contributions of four variables (gender, age, career choice and attitude) to students' establishment skills. While the other four variables father's highest qualification, mother's highest qualification, father's occupation and mother's occupation did not contribute significantly to students' forest plantation establishment skills. The table equally showed the contribution of each independent variable on the dependent variable. Gender contributed most significantly with ($\beta 1 = -0.279$, $t = -5.816$, $p < 0.05$) and was followed by age with ($\beta 2 = 0.170$, $t = 3.637$, $p < 0.05$). Next in the order of significant contribution is students' motivation to career choice with ($\beta 7 = 0.173$, $t = 3.472$, $p < 0.05$) and lastly, students' attitude with ($\beta 8 = 0.133$, $t = 2.861$, $p < 0.05$).

Discussion

The findings from table 2 revealed that the nine variables (i.e. gender, age, father's highest qualification, mother' highest qualification, father's occupation, mother's occupation, career choice, students' attitude and school location) made significant joint contribution to ND students of FCF forest plantation establishment skills. This is also an indication that students' factors have positive impact on farm establishment skills of the students. Result and observations from tables 3 revealed that the students' variables that made significant relative contributions to students' forest plantation establishment skills are gender, age, motivation to choice of career and attitude. However, what motivated the students' choice of the course of study contributing to students' establishment skills, could be that if students are in the field where they have keen interest, they are expected to find the work/activities much interesting and develop the enthusiasm to facilitate their learning process that will ultimately affect their academic performance.

Gender is another factor that contributed greatly to students' forest plantation establishment skills. The role of gender in the contribution to students' establishment skills could be attributed to the fact that in some places, the cultural roles of females and males are clearly defined. For instance, In India (Kerala state) and Sri Lanka, women are the principal practitioners of traditional agroforestry in production systems as home gardens (Kumar and Nair 2004). In such a place and activity, women are expected to be better in handling farm skills than their male counterparts. The result of this study has also shown that the attitude of the students towards their course of study has great influence on their forest plantation establishment skills. This finding is in agreement with Osborne, simon and collins (2003) who reported that a positive correlation exits between students' attitude towards science and performance in science courses. However, the finding contradicts Awolola (2009) who reported a non-significant effect of attitude on achievement. The result also showed that mother's education and father's education did not contribute to student's performance. This finding contradicts Amitava, Manojit, Saswata and Braja (2010) who reported positive correlation between mother's education and student's academic performance. The skill acquisition of the student depends on a number of socio psychological factors only four (gender, age, motivation to choice of career and attitude) have been identified by us. There may be other factors which may have direct effect on the performance of the students. This present study can be carried out in other technical and vocational colleges that offer forestry education to establish an affirmation result. Also other variables can be used to detect what most significantly and effectively contribute to students' skills acquisition.

Conclusion and Recommendations

This study revealed that students' factors such as gender, age, attitude and what motivated their career choice, made significant relative contribution to forest plantation establishment skill acquisition of the students in the Federal Colleges of Forestry. However, the socioeconomic factors of the students such as father's highest qualification, mother's highest qualification, father's occupation and mother's occupation did not make any significant relative contribution to students' forest plantation establishment skills. This implies that socioeconomic factors of the college student have no effect on their farm skill acquisition. It is therefore recommended that factors such as gender, age, motivation to choice of career and attitude should be considered while designing or reviewing policy making decisions on skill acquisitions in the Colleges.

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