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Career counselling and Diagnostic Remediation As Instruments For Sustaining Students' Interest And Attitude Towards Learning Agricultural Science In Ekiti State, Nigeria.

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Abstract
Background:*This study evaluates and forecast the effect of interest and attitude as a correlate for academic performance of students in Agricultural Science in Ekiti State Secondary Schools. It investigated which of the two variables (Interest and Attitude) will mostly influence the study of Agricultural Science using a particular teaching method. Two hypotheses were formulated and tested at 0.05 level of significance.*
Material and Method:*The researchers adopted the pretest – posttest and control group design of quasi – experimental research type. The study sample consisted of 90 Senior Secondary School One Students (SSS I) randomly selected from Ekiti south senatorial district inEkiti State. Two research instruments; Students' Attitude towards Agricultural Science Questionnaire (SAASQ) and Agricultural Science Achievement Test (ASAT) (Interest) were used for data collection while multiple regression were used for data analysis.*
Results:*Results of analysis revealed that students Interest possessed the strongest variable than attitude in the academic performance of students in Agricultural Science.*
Conclusion:*Agricultural Science teachers should use good innovative methods that will stimulate students' interest in Agricultural science andThe need to intensify more efforts in school guidance and counselling as supportive services to enhance students' change of attitude towards choice of career in Agriculture.*
Keywords: *Student's attitude, Interest, Academic Performance, Diagnostic remediation method, Career Counselling*

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I. Introduction

The high rate of unemployment and the economic downturn in Nigeria in the recent time had necessitated the need to focus on courses that will enhance learning for self – reliance. Sustainable Development Goals (SDGs) clamours for eradication of poverty and hunger as a strong pillar for ensuring healthy life and society. In Nigeria apart from crude oil, agriculture remains the central component of its economy and this attest to why the governmentmoves toward the achievement of the Sustainable Development Goals (SDGs) and emphasised thediversification of the economy from oil – driven to Agro – based and technology driven. The need to embrace educational reforms that focuses on new skills and robust vocational and technical education at both public and private sectors had been emphasized[1,19].

Food Agriculture Organization of the United Nation in its facts sheet revealed that there are more than 14million malnourished children in Nigeria. It is believed that if 21.5% of the unemployed youth are gainfully engaged in Agriculture, Nigeria economy will improve from dwindling situation where more products are consumed and less are produced [20]. Different programmes are springing up to encourage Nigerian youths towards the choice of career in Agriculture and other vocational, technical and entrepreneurial studies.Unfortunately, larger percentage of Nigerian youth perceived involvement in Agriculture and Agribusiness as old fashioned and unprofitable venture thus seeking career in medicine, engineering, social and management sciences. In recent time it seems the choice of Agriculture as a subject in secondary schools is dwindling most especially in Ekiti State where majority of the citizen resides in the agrarian areas. It was

observed that very few students have the interest and attitude for thesubject and those who offered it at WAEC or NECO are just doing so for the purpose of having additional credit pass or as one of the trade subjects that must be registered for at O' Levels. The dwindling enrolment in such a vital subjects had necessitated the need for investigation into the remote causes and the need to improve on career counselling in other to change some of the irrational thinking which gave room fpor loss of interest and attitude for the students towards the subject.

II. Literature Review

Students' Attitude and Interest towards Learning Agricultural Science

Research studies has revealed that interest and attitude could play a vital role in student's academic performance or achievementin agriculture and that the cumulative effect may extend to some other related subjects[20,16]. Attitude which may be overt or covert is the sum total of a person's inclination towards a particular objects, it embraces all aspects of individual's personality development like perception, motives, values, vocational adjustment derived from vocational pursuits and other phases of individual daily lives [15]. Attitudes comes to play due to the interferences of a three mechanisms of cognitive processes which determines individuals beliefs and thoughts, behavioural processes which defines human reactions in a particular manner and affective processes which encompassesindividuals feelings or emotion towards an object[3, 14].Therefore attitude as an important precursor of human action may have a landmark influence on individual's life and performance. For instance a stereotyped attitude can affect achievement where flexibility of outlook is required while a poor attitude could be responsible for failure, fear or hatred for a particular subject[8].

Considering the attitude of Nigerian students to agricultural science,there seem to be the general perception of low future prospect in agricultural related profession or the belief that those who engage in it may end up as mere poor farmer.This may attest for while students who grew in the rural area and familiar with farm work are seeking for white collar job. For instance, findings on the effect of location on students' attitude towards the choice of Agricultural Science in a study comprising 660 students, the result shows that urban school students generated favourable attitudes towards the subject than those from rural schools[17].Some students also believed that agricultural Science being a practical oriented subject is difficult and energy sapping with little or no profitable gains. It was established that negative attitudes are major causes of students" under achievement or poor performance and that the same negative attitude has its effect on other subjects[14, 16, 20]. Research studies also revealed that factors such as peer pressure, misconception, weak perception, parental perfectionism or influence, lack of corresponding facilities and structures could be responsible forsuch negative attitude towards learning agriculture thus making students seek alternative career other than agriculture [10]. Studies show thatstudents' negative attitudes to agricultural science learning may also bedue to the inabilities of teachers to satisfy the students' aspirations or goals due to faulty teaching methods where teaching activities focused more on cognitive development using textbooks rather than the application of agriculture towards self – reliance[12]. Other reasons adduced for poor performance and underachievement in agriculture include negative attitudes, lack of self – awareness of potentials, poor counselling services on choice of subjects, schools' administrative policies

From the aforementioned points, one could submit that students positive attitude toward a particular subject might be by establishing the potentials inherent in that subject and the onus for Students' attitudinal change towards learning ofagricultural science lies in the hands of the subject teachers to introduce workable teaching methods and the school counsellors to assist the students in self – awareness of their potentials, strengths and capabilities. These would not only bring about a more positive attitude towards learning agricultural science for their students; but will give the students the scientific skills and the logics required to perform at optimal and for self-reliance.

Another area is interest, though a personality factor is considered for use in this study as that variable which could forecast the level of learning difficulty of the student in a particular area of study. Interest on the other hand which may either be personal or situational refers to learner's predisposition to react positively in a particular way to a concept, event or situations which may depends largely on the potential or actual fulfilment of ones needs or goals [18].

It is believed that the passion and the degree of likeness an individual student possess towards a particular subject can determine his/her academic performance in such subjects, interest in more than a discipline, is the key to education successes. [7],For this submission, it means that at any level of graduation, learners will learn better in subjects or coursesif they have some degrees of likeness for such subjects or the courses". This implies that learners will fail to learn little if they do not like the subjects. Interests therefore at a higher stage become a subjective feeling of value which is experienced when striving. This feeling implies an end-point-on object, a reward, purpose or situation in which one is interested and for which an individual strives at [11]. This means that when one is interested in a thing, one is ready to devote attention and concentration. There would be the tendencies for such individual to pay more attention to such subject when they have the interest

and the right attitude. They would likely listen to teachers while he teaches, take more time to read the subject and even complete assignment to time among others.

Thomas, in his study of the educational interest according to [7] found that with the ability held constant, through statistical techniques, students with educational interest have grade point averages in specific related courses than with low interest scores. The aforementioned therefore, is in agreement with the submission of [13], that, there is a reciprocal relationship between interest and learning achievements as each reinforces the other. This then indicates that interest measure can serve as a motivating factor of attention and thus enhancing good memory to the learners. Therefore, the level of learning difficulty of students is minimized for those with good personalities, right attitudes and high level of educational interest in a particular subject. Consequently, effort must be made to see that students develop the right attitude to learning and where such is hindered by the teacher or any other factors, attempt must be made for necessary adjustments. In a related study where effects of cooperative small group instructional mode on primary school pupils‟ attitude towards agricultural science was investigated, findings revealed that cooperative small group instructional mode proved to be more potent in stimulating pupils‟ interest to developing more positive attitude towards science and technology than the conventional method of teaching[21, 14]. Findings on efficacy of self-regulation process of students interest in quantitative chemical analysis also revealed that teaching methods adopted by teachers has a lot of significant on the interest of students and their academic performance [5]. The study confirms that self- regulation enhanced the interest of students in the experimental group more than the students in the traditional group. The reason for this observation could be due to the fact that the stages used in the process of self-regulation were meant to actively involve the learner, as well as create an environment in which equilibration can occur in the minds of learners. Local materials used were meant to capture the interest of students and to help them link materials in the environment with activities in the classroom.Corroborating the findings in another similar study, it was found out that certain instructional factors are important in the development of science interest among secondary students[4].

Attitude to agricultural science and interest could play a substantial role among the student studying the subject, but the problem of which of the two variables will possess the strongest strength for producing performance still remain inconclusive. This necessitated the imperativeness of such variables for further verification in this study. The purpose of the study is to investigate which variable is an essential attribute to the study of agricultural science, which will forecast students‟ performance in agricultural science. To find out which one out of the variables (attitudes and interest) is firstly influenced under a particular teaching method corroborated with career counselling session. This study therefore investigateto what extent would Students' Attitude towards Agricultural Science (SAAS) and Agricultural Science Achievement Test (ASAT) in Agricultural Science forecast students' academic performance? What is the relative contribution of the independent variables to the forecast?

Need for Career Counselling

The job market had over the years become more competitive with the rate of unemployment rising beyond cope, this had necessitated government at various level to advocate for diversification to such career that would make an individual an employer of labour rather than job seekers. Government across culture are focusing more on agriculture and technology as alternative to alleviate poverty and promote food security. The choice of an individual and his efforts in choosing the right subject and career would go a long way to determine the quality of one's life and future [2, 8]. The implication of this statement is that an individual is the architect of his own fortune and misfortune as one's interest and attitude tends to influence his choice at a given period.

In a nation like Nigeria where the internet is filled with misinformation, high rate unemployment and economic downturn with the youth been referred to as lazy, choosing career most especially in Agriculture may be difficult. Many students may lack the self – awareness of their interest, potentials and capabilities that can guide them in making the right choice of career, some may choose their career based on misinformation, ignorance and irrational thinking. Therefore the place of school counsellor and career counselling services at helping individual cannot be undermined. Counselling as a school support service refers to an interaction between a trained personnel (Counsellor) and one or few people (client) with the aim of identifying a number of procedures through which assistance can be rendered towards resolving educational, vocational and personal social problems[2, 14, 4]. It is to help students resolve his confusion and be able to make effective decisions [6].

Career or Vocational Counselling assist students/clients to have a deeper knowledge and insight to their personal attributes and matching with available job to plan for their future [9]. As earlier mentioned quite a number of extraneous factors may prevent secondary school students from enrolling for agriculture as a subject or taking career in agricultural related arrears. The focus of this paper is on the personality factors like interest and attitudes as a means of predicting students' choice of learning Agricultural Science. Counsellor can therefore organize career talk to expose the students to the wide varieties of opportunity in Agriculture and agribusiness. The use of diagnostic test used to diagnose or to reveal an individual's weakness and strengths in a certain course of study. It tries to discover the specific area of weakness of a student in a given course of

instruction and then suggest remedial measures.A psychological test material such as (Interest inventory, Attitudinal rating scales) can be used by the counsellor to assist the students to match their attributes with existing vocation towards making a choice that will lead to sustainability. Counsellors can also assist the teachers on the right of choice of teaching methods that will simplify his work and boost student's interest and change their attitude towards learning Agriculture.

III. Methods

The study is a quasi-experimental type that employed the pretest posttest control group design. The population consisted of 10, 359 according to the Ministry of Education, Science and Technology, Ekiti State in 2021. A sample of 90 students comprising 30 high ability, 30 middle ability and 30 low ability groups. Two coeducational secondary schools from Ekiti South senatorial district in Ekiti State were randomly selected from which an intact Senior Secondary School One (SSS I) class was selected from each schools as sample for the study. The choice of SSI class was to enable the students have enough self – awareness of their potentials before making the choice of subjects for WAEC and NECO. The main instruments for the study were Students' Attitude towards Agricultural Science (SAAS) and Agricultural Science Achievement Test (ASAT). These instruments were re-validated and the psychometric properties were found to be satisfactory as the reliability indices indicated 0.66 and 0.71 for SAAS and ASAT respectively. The students were subjected to pretest using SAAS, and ASAT to find out the area of learning difficulties of the students, attitudes and interest toward learning Agricultural Science. Necessary permissions were obtained from the school authorities before the students were engaged.The students in the experimental and the control group were given pretest before treatment commenced with the experimental group. As part of the treatment session, career talk was organized for the experimental group on the prospect of agricultural science and the importance of learning for self – reliance in a period of economic downturn where the rate of unemployment is on the rise. After the treatment, the students were then post-tested after four weeks. All the treatment sessions took place during school hours. The data collected for the study were analyzed using multiple regression.

IV. Results and Discussion

HO: Students' Attitude towards Agricultural Science (SAAS) and Agricultural Science Achievement Test (ASAT) (Interest) will not significantly forecast academic performance of students with varying ability levels in Agricultural Science.

Table 1a. Summary of regression analysis of students' forecast variable (SAAS and ASAT) on academic performance in Agricultural Science.

	SS	Df	Ms	F-cal	F-tab
Regression	2822.818	2	1411.409	5.394	3.38
Residual	7064.648	27	261.654		
Total	9887.467	29			

Multiply R=0.534, R^2=0.285, Adjusted R^2=0.233, Standard Error=14.400.

Table 1b. Test of significance of regression coefficient.

Variable	B	Standard error	Beta	t-value	t-tab
Constant	28.132	21.658	0.205	1.299	
SAASQ(Posttest)	0.448	0.377	0.430	1.188	2.051
ASAT (posttest)	1.578	0.632		2.495	

P=0.05, Critical t = 2.051

(Field work, 2021)

Table 1a indicated that there was a linear relationship between the predicator variables and the criterion variables Agricultural Science Achievement Test (ASAT) Academic performance of the Diagnostic Remediation group of SSS I students. The multiple correlation coefficients R were

0.534. This indicated that a moderate positive relationship exists between the predictor variables and the criterion variable. The table also indicated that R^2 yielded 0.285, that is, 28.5% of the variation in the

academic performance of the (DR) group was attributable to the joint effect of the predicator variables. The analysis of variance (ANOVA) for the regression (predication) show that F-ratio was 5.394 which was significant at 0.05 alpha level as the F-table was 3.38. Table 1b gives the multiple regression equation as: Y = 28.132 (Academic performance) + 0.448(SAAS) + 1.578(ASAT).

The Table 1b revealed the contribution of each of the SAAS and ASAT to the academic performance of the subjects in the high ability level. The contribution of each of the predicator (SAAS and ASAT) variables were as shown in the values of the regression co-efficient range from 0.448 to 1.578. It showed the standard errors as 0.377, 0.632 and 21.658 while the t-values were 2.495 and 1.188. The table showed that at probability level of 0.05, the t-value for SAAS 1.188 showed a non-significant contribution to academic performance of the students in their ability level group, while the t-value for ASAT 2.495 showed a significant contribution to academic performance of the students in the ability level group.

The regression equation indicated that for every unit increase or decrease in performance of students in the (DR) high ability level, there will be a corresponding increase or decrease by 0.448 and 4.5 (15.8%). The table showed that ASAT had the highest Beta weight of 0.430 and hence, it possessed the strongest strength for predicting performance among the students in their different ability level groups.

There was a significant contribution of ASAT to academic performance of the students in the group. This showed that ASAT had the highest beta weight on students" performance in Agricultural Science as it produces the strongest strength for forecasting performance among the students. The study showed that a good teaching method (diagnostic remediation) increases or boosted the academic achievement, interest and attitude in agricultural science. Also, the social relationship of the students in the (DR) class setting was boosted. This is in support of [20, 21] that co-operative small group instruction proved to be potent at stimulating pupils to develop more positive attitude and interest towards science and technology.

This agrees with the submission of [13], that there is a reciprocal relationship between interest and learning achievement as one reinforces the other. This then indicates that interest measure can serve as a motivating factor of attention and thus, enhancing good memory of the learner. The outcomes of the study support the suggestions of [2, 11, 8, 17, 18] that the solution to attitude change lies in the hands of the teachers and that teachers should make the classroom environment interesting while appropriateteaching methods to boost the interest of students' towards learning of agricultural science, as this change will not only bring about an improvement in students' performance but will also bring about lasting and permanent positive attitude towards the subject.

V. Conclusion

Based on the findings from the study, it is therefore concluded that the established role of diagnostic remediation method of teaching should be exploited and utilized by teachers in an attempt to make learning more meaningful to the learner and thereby aimed at improving learning outcomes. Counsellors should from time to time organize career talk, seminars and field trip to sensitize students towards learning for self – reliance. The use of psychological test materials like Interest Inventory, Study Habit Inventory, and Occupational rating Scales among others should be employed in assisting students to make the right choice of subjects. Workshop and In – Service training can also be organized for teachers to keep them abreast of new teaching methods.

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