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### **Full Length Research**

# Relationship between teacher interpersonal relationship and innovativeness and students' academic achievement in agricultural entrepreneurial subject in senior secondary certificate examination in Niger state

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The study determined the relationship between teacher interpersonal relationship and innovativeness and students' academic achievement in agricultural entrepreneurial subjects in Senior Secondary Certificate Examination in Niger State. Two research questions and two null hypotheses guided the study. The study adopted a correlational research design and was carried out in Niger State. The target population of the study was all the 151 agricultural teachers from a total of 217 Senior Secondary Schools in Niger State. Purposive Population Sampling Technique was used to select the 151 agricultural teachers in Senior Secondary Schools in Niger State, because the population was manageable. The instrument for data collection was a structured questionnaire titled: Agricultural Entrepreneurial Subjects Teachers' Characteristics Questionnaire (AESTCQ) developed by the researchers. It was a 4-point rating scale of strongly agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) with numeric values of 4, 3, 2 and 1 respectively. The Cronbach's Alpha coefficient of the instrument was found to be 0.82. The data for the study was analyzed using and Pearson Product Moment Correlation (PPMC) and Regression Analysis. Findings of the study revealed a positive and significant relationship between the variables and the academic achievement of agricultural entrepreneurial subject students in secondary school certificate examination in Niger State. The study therefore recommended amongst others that, government should develop a framework for enhancing the innovativeness of teachers so as to improve the academic achievement of agricultural entrepreneurial subject students.

**Keywords:** Interpersonal Relationship, Innovativeness, Students' Academic Achievement, Agricultural Entrepreneurial Subject

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#### INTRODUCTION

A teacher is a person who helps students to acquire knowledge, skills attitude and idea in any field of study. He is someone who has undergone the necessary and recommended training in teaching preparatory programs and is charged with the full responsibility of imparting knowledge in such a way that it enhances the learning behaviour of the students. Akinsolu (2010) is of the view that teachers are vital pre-requisite for student attainment of educational goal as well as their performance in school subject. Teachers play a crucial role in educational attainment as they are responsible for translating policy into action and principles based on practice during interaction with students (Schön, 2017). The teacher is an essential element in the teaching and learning process. What he does or does not do affect learning. The teacher is the key factor in whether or not students learn well, also the most powerful person in the classroom. Okemakinde, Alabi and Adewuyi (2013) stressed that teachers influence is always felt in every aspect of the society and this illustrates the pivotal position teachers occupy in the society. Teacher's power is such that even when he does nothing, he does something to the class. He has an effect on the class when he is not present. Duse and Ogbha (2013) opined that teachers touch lives of learners with varying ability levels, including those with significant disadvantages.

According to Cook (2016) education cannot be provided by just anybody, it requires a teacher who plans and delivers the lesson or instruction in such a way that objectives can be achieved. Teaching and learning of agricultural entrepreneurial subjects depend to a large extent on teacher's knowledge of the subjects and ability to adequately deliver the instruction to students. Nilson (2016) pointed out that teachers deserve neither all the credit for success nor all the blame for failures because many factors affect students, yet numerous research studies pointed to the importance of the teacher in the classroom in relationship to student performance. Schön (2017) stated that teachers are ultimately responsible for translating policy into action, if the teacher is ineffective, it might affect the performance of students. Owolabi (2007) was also of the opinion that government should find all possible means to retain veteran and experienced teachers who are still willing to serve so that they can contribute their wealth of experience to improving the system of education.

When teachers form positive bonds with students, classroom becomes supportive space in which students can engage in academically and socially productive ways (Modi, 2015). Teacher-student relationship affects early academic and social outcomes as well as future academic outcome. Bazier (2015) reported that the most frequently mentioned qualities of effective teacher are: subject-matter mastery, dedication, cooperation, and sense of humor, creativity, efficiency, and self-control, and discipline, standard, promptness with reports methods and generosity with personal time with students. Noddings (2015)reported that essential characteristics of a good teacher are; knowledge of the subject matter, leadership character, personality, commitment to teaching, confidence, ability to cooperate intelligence, emotional maturity, physical abilities and programme evaluation. These qualities are geared towards making a significant impact on the lives of the student.

Students' ability to connect with their teachers is one attribute that can make a great difference in students' learning achievement. Nwachukwu (2016) defined the student-teacher relationship, as "emotions-based experiences that emerge out of teachers' on-going interactions with their students." When students feel that their teachers are supportive, trustworthy people, they tend to create a connection with their teacher and start to see their teachers as someone who is there to protect them and give them all the chance to enhance their learning and at the same time behave well. When social and psychological relationships with students are established, it creates a positive relationship and also promotes social development and self-esteem among students. When a student perceive that he is welcomed and wanted in the classroom, he is more likely to be engaged and motivated, thus the role the teacher plays in classroom affect the perception the student has on the relationship and classroom environment, which ultimately contribute to academic achievement. Hence, healthy teacher—student interpersonal relationships set a prerequisite for students to engage in learning activities (Tomlinson, 2014). Almost everyone has experienced different interpersonal teacher's behavior, some teachers are distant and others sociable, some are well-organized and others chaotic. In a collective society like Indonesia, interpersonal closeness, represented by the substantial contact among individuals in their daily lives, is highly valued.

In order to develop trusting relationships with students and foster emotional intelligence in the classroom, teachers must first acknowledge that students need to believe in them. If students believe in their teacher, they will trust their teacher. Consequently, trust and belief need to be reciprocated by the teacher, who must in turn 'genuinely' care for the students. Teachers must also be prepared to not present themselves as superior beings destined to treat their students like their subjects. Developing good relationships with students will help them in all areas of learning. According to Noddings (2015), teachers need to develop caring relationships with their students in order to develop an in-depth understanding of their learning needs and abilities. Building genuine trustworthy relationships between teachers and students is pivotal in student capacity to learn (Bradford and Braaten, 2018). Stronge (2018) suggest that if we teach

our students the strategies they need to promote self-regulation of emotions, then they will develop the emotional competence and skills that they require to succeed in their personal, social, and academic lives. When students know that their teacher has their best interest at heart, it will respond to their actions and reactions in a fair and consistent manner which will also show in their performance.

Juma (2016) defines innovation as things, ideas, or practices perceived as new by the population that the innovation is introduced. Besides, "innovation" means both the creative process and the product itself. At the same time, "innovation" can be defined as the process of cognitive state of the person adopting the innovation, and becoming a part of behavioral repertoire (Reader, Morand-Ferron and Flynn, 2016). Innovativeness can be seen in two forms in the literature; individual and institutional. Individual innovativeness is defined as being willing to experience new things, take risks, and be open to experience in terms of character (Burrelland Cooper, 2015). The essence of individual innovativeness is the uniqueness of the intellectual picture of the individual in nature. In other words, innovators' interpretation of what is happening in the unique view, understanding and reality surrounding them is the key to scientifically understand individual innovation (Kincheloe, 2018). Innovative teachers encourage students to recognize and discover their potential, whereas setting high standards for student learning. Teachers can play innovative roles in their classes depending on their characteristics.

#### Statement of the Problem

In a bid to bring about educational development capable of fostering national development, huge resources have been spent on education, agricultural entrepreneurship subjects inclusive. Unfortunately, these efforts are yet to yield the desired outcome. Lawal and Adejuwon (2014) reported that students of agricultural entrepreneurship subjects perform poorly in National Examinations conducted by West African Examinations Council and National Examinations Council. For instance, statistics over the past five years from 2014 -2018 corroborated this: the results show that students of animal husbandry in Niger State recorded 15.37% in 2014, 56.92% in 2015, 42.51% in 2016, 55.73% in 2017 and 40.54% in 2018 pass level (NECO, 2018). In the same vein, students of fishery in Niger state recorded 72.93% in 2014, 78.97% in 2015, 64.43% in 2016, 66.92% in 2017and 60.13% in 2018 pass level (NECO, 2018).

Since teacher is the key implementer of the curriculum and controls what goes on in the classroom, from the result above, it is of concern because good results are expected from students after investing heavily in secondary school education. According to Borgen and Hjardemaal (2017) students' academic achievement in agricultural entrepreneurial subjects is a function of productivity of the teachers handling the subjects. Teacher characteristics such as qualification, teaching experience, age, gender, interpersonal relationship with students, attitude and innovativeness among other things determine his productivity. Bamidele and Adekola (2017) reported that teacher characteristics have been identified to play significant role in students' academic achievement. However, Atherton(2003) noted that student academic achievement is dependent on several factors namely; teaching method, guidance, availability of facilities, method of testing, background, organization, motivation and opportunity. Adu and Olatundun (2007) stressed that teacher characteristics are strong determinants of students' academic achievement in schools. They also reported that teacher characteristics can influence student academic achievement and can make great difference in secondary school education. Ibe, Nworgu and Ayaegbunam (2016) noted that there can be no quality education without equipped, prepared and motivated teachers who possess the pedagogical skills, teaching method, attitude, work ethics, responsibilities and interpersonal relationship. These are some of the teacher characteristics that are capable of setting up a situation in which learners can learn effectively towards improving their academic achievement in the subject area. Despite efforts made to improve it, poor academic achievement still persists, therefore, the inconsistency in the academic achievement of students of agricultural entrepreneurial subjects in Niger state could have a link to teacher characteristics and so is worth investigating. Hence the problem of this study is to determine if there is a relationship between teacher interpersonal relationship and innovativeness and the student's academic achievement in agricultural entrepreneurial subjects in senior secondary school certificate examination in Niger state

#### **Purpose of the Study**

The study determined the relationship between teacher interpersonal relationship and innovativeness and students' academic achievement in agricultural entrepreneurial subjects in Senior Secondary Certificate Examination in Niger State. Specifically, the study determined the relationship between: -

- 1.Interpersonal relationship of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE.
- 2.Innovativeness of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE.

#### **Research Questions**

The study provided answers to the following research questions:

- 1. What is the relationship between interpersonal relationship of teachers and the academic achievement of student of agricultural entrepreneurial subjects in SSCE in Niger State?
- 2. What is the relationship between innovativeness of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State?

#### **Hypotheses**

The study tested the following hypotheses at 0.05 level of significance:

**HO**<sub>1</sub>: There is no significant relationship between interpersonal relationship of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State.

**HO<sub>2</sub>**: There is no significant relationship between innovativeness of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State.

#### **METHODOLOGY**

Correlational research design was used for this study. The study was conducted in Niger State, which is located in the North Central Zone of Nigeria. The target population of the study was all the 151agricultural entrepreneurial subjects teachers from a total of 217 Senior Secondary Schools in Niger State. Purposive Population Sampling Technique was used to select the 151 agricultural entrepreneurial subjects teachers in Senior Secondary Schools in Niger State, because the population was manageable. The instrument for data collection was a structured questionnaire titled: Agricultural Entrepreneurial Subjects Teachers' Characteristics Questionnaire (AESTCQ) developed by the researchers. It was a 4-point rating scale of strongly agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) with numeric values of 4, 3, 2 and 1 respectively, and was used to elicit information on teacher characteristics. Face validity of the instrument was established by experts in agricultural entrepreneurial subjects. Two lecturers of Agricultural Technology Education in Vocational Education Department, Moddibo Adama University Yola and a teacher of agricultural entrepreneurial subject in public secondary school in Minna, Niger state. The reliability of the questionnaire was ascertained by administering it to 15 agricultural entrepreneurial subjects teachers in Kaduna North and Kaduna South Local Government areas. The Cronbach's Alpha coefficient of the instruments was found to be 0.82. The data for the study was analyzed using and Pearson Product Moment Correlation (PPMC) and Regression Analysis. PPMC was used to answer all the research questions and Regression analysis was used to test the null hypotheses at 0.05 level of significance.

#### RESULTS

**Research Question One:** What is the relationship between interpersonal relationship of teachers and the academic achievement of student of agricultural entrepreneurial subjects in SSCE in Niger State?

**Table 1:** Pearson Product Moment Correlation for the Test of Relationship between Teachers' Interpersonal Relationship and the Academic Achievement of Students of Agricultural Entrepreneurial Subjects in SSCE in Niger State

Variables		Academic	Interpersonal Relationship	
		Achievement		
Interpersonal	Pearson Correlation	.863 ^^	1	
Relationship	N	151	151	
Academic .	Pearson Correlation	1	.863 <sup>**</sup>	
Achievement	N	381	151	

Table 1 shows the Pearson product moment correlation for the test of relationship between teachers' interpersonal relationship and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. The result shows that, the correlation coefficient between teachers' interpersonal relationship and the academic achievement of students of agricultural entrepreneurial subjects in SSCE is .863. This indicates high positive relationship between teachers' interpersonal relationship and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. The high positive relationship implied that, teachers' interpersonal relationship plays an important role in determining the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State.

**Research Question Two:** What is the relationship between innovativeness of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State?

**Table 2:** Pearson Product Moment Correlation for the Test of Relationship between Teachers' Innovativeness and the Academic Achievement of Students of Agricultural Entrepreneurial Subjects in SSCE in Niger State

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Variables		Academic Achievement	Teachers' Innovativeness
Teachers'	Pearson Correlation	.865**	1
Innovativeness	N	151	151
Academic	Pearson Correlation	1	.865 <sup>**</sup>
Achievement	N	381	151

Table 2 shows the Pearson product moment correlation for the test of relationship between teachers' innovativeness and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. The correlation value of .865 was obtained for the relationship between teachers' innovativeness and the academic achievement of students of agricultural entrepreneurial subjects in SSCE. This value indicated that, there is high positive association between teachers' innovativeness and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. The high positive relationship implied that, the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State is positively influenced by teachers' innovativeness.

#### Hypothesis One

**HO₁:** There is no significant relationship between interpersonal relationship of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State.

**Table 3:** Regression Analysis for the Test of Significant Relationship between Teachers' Interpersonal Relationship and Students Academic Achievement in Agricultural Entrepreneurial Subjects in SSCE in Niger State

Model	Unstandardized coefficient		Standardized coefficient	R square	Т	Sig
	В	Std.error	Beta			
Interpersonal relationship	2.003	.096			20.848	.000**
			.863	.745*		
Academic achievement	-1.070	.0311			-3.441	.001

Table 3 reveals the regression analysis for the test of significant relationship between teachers' interpersonal relationship and students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State. The result displayed that, the significant criterion (sig.) or p-value was 000 which is less than the confidence level of 0.05.

The result highlighted that, there is statistically significant relationship between teachers' interpersonal relationship and students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State. Therefore, the null hypothesis of no significant relationship between teacher's interpersonal relationship and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger Statewas rejected. Moreover, the result also made known, the coefficient of determination (R square) as .745. This concluded that, 74.5% of the variation in students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State is attached with teachers' interpersonal relationship.

#### Hypothesis Two

**HO<sub>2</sub>**: There is no significant relationship between innovativeness of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State.

**Table 4:** Regression Analysis for the Test of Significant Relationship between Teachers' Innovativeness and Students Academic Achievement in Agricultural Entrepreneurial Subjects in SSCE in Niger State

Model	Unstandardized coefficient		Standardized coefficient	R square	Т	Sig
	В	Std.error	Beta			
Teachers' innovativeness	1.788	.085			21.028	.000**
			.865	.748*		
Academic achievement	251	.272			930	.354

Table 4 shows the regression analysis for the test of significant relationship between teachers' innovativeness and students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State. The analysis showed that, the significant criterion (sig.) or p-value was.000 which is less than the confidence level of 0.05. The result highlighted that, there is statistically significant relationship between teachers' innovativeness and students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State. Hence, the null hypothesis of no significant relationship between teacher's innovativeness and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger Statewas rejected. Furthermore, the result also shown that, the coefficient of determination (R square) was .748. This inferred that, 74.8% of the variation in students academic achievement in agricultural entrepreneurial subjects in SSCE in Niger State was accounted for by teachers' innovativeness.

#### **Discussion of Findings**

Findings from the study revealed that there is a positive relationship between the interpersonal relationship of teachers and the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. The hypothesis that was tested also indicated that there is a significant relationship between teachers' interpersonal relationship and the academic achievement of students of agricultural entrepreneurial subjects in SSCE. It implies that as they access new ideas, experiences and exposures and put them to use, the students they teach are better off and so perform better in SSCE. This was buttressed by the findings made byFan (2012) and Ibe, Nworgu and Ayaebunam (2016) who reported that teachers' interpersonal relationship significantly influence students achievement in Biology. This is not farfetched because, teachers who are sociable and relate well with their colleagues, have greater tendency to access new ideas, experiences and exposure which the formal training they went through may not give them. In addition, teachers who have high interpersonal relationship skills, are accessible to their students and have the opportunity to understand his students better. A situation that enables him to tailor his lessons in a way that meet their individual needs, and thereby helping the students to achieve better performance levels in internal and external examinations.

Also, the findings of the study revealed that the innovativeness of teachers has a positive relationship with the academic achievement of students of agricultural entrepreneurial subjects in SSCE in Niger State. In the same vein, the null hypothesis that was tested at a p-level of 0.05 revealed that there is a significant relationship between teachers' innovativeness and the academic achievement of students of agricultural entrepreneurial subjects in SSCE. This means that the more a teacher is innovative the better is his output and so the academic achievement of his students in agricultural entrepreneurial subjects. This position is corroborated by Parlar and Cansoy (2017) who found out a positive significant relationship between the individual innovativeness characteristics of openness to experience and opinion-leading, and teacher professionalism. Additionally, Vasudevan (2013) who studied the influence of teachers' creativity, attitude and commitment on students' proficiency of the English Language, reported that creative thinking, creative learning, creative teaching, teachers' attitude and teachers' commitment positively and significantly influence students' proficiency in English language. This does not come as a surprise because innovativeness (creativity) takes care of a teacher's willingness and openness to adopt new ideas with a view of effecting a change in the existing situation (Parlar & Cansoy, 2017). Adopting new ideas and the willingness to take change to a higher degree has over time enabled teachers give their students the extra push that has enabled them achieve better results in school subjects especially in agricultural entrepreneurial subjects.

#### CONCLUSION

The academic achievement of students in agricultural entrepreneurial subjects in senior secondary schools across the country is an important aspect of the economic development of the nation. This is because it is one of the means of appropriately reporting whether or not the classroom instructional activities are being effectively carried out. Some of the factors that affect the output, as found by this study, are teacher characteristics such as innovativeness and interpersonal relationship. This study found a positive and significant relationship between the variables and the academic achievement of agricultural entrepreneurial subjects' students in secondary school certificate examination in Niger State. In essence, the academic achievement of agricultural entrepreneurial subjects students in secondary school certificate examination in Niger State is enhanced when the teachers that are teaching the subjects have good innovative aptitude and optimum interpersonal relationship skills.

#### RECOMMENDATIONS

Based on the findings of the research the following recommendations were made:

- 1. Conferences, workshops and seminars on building interpersonal relationship skills should be periodically organized for teachers in order to help boost their productivity.
- 2. The government should develop a framework for enhancing the innovativeness of teachers so as to improve the academic achievement of agricultural entrepreneurial subjects students.

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