INFLUENCE OF LECTURER'S ATTITUDE ON STUDENTS PERFORMANCE IN SCIENCE EDUCATION IN FEDERAL UNIVERSITY OF TECHNOLOGY MINNA, NIGER STATE

BY

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2017/3/69290BE

DEPARTMENT OF SCIENCE EDUCATION
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

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A PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGERIA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF TECHNOLOGY IN SCIENCE EDUCATION (MATHEMATICS OPTION)

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ABSTRACT

The study assessed the influence of lecturer's attitude on students performance on Science Education in Federal University of Technology Minna. The specific objectives of the study was to determine how the lecturer's attitude influences mathematics education students performance, determine how the lecturers attitude influences chemistry education students performance and to determine how the lecturer's attitude influences biology education students. Three corresponding research question were raised to guide the study. The total population used for this study is one hundred and eighty six (186) students, session 2019/2020. A purposive sampling technique was used to select Science Education Departments among the two departments, simple random sampling technique was used to select the sample size of Ninety (90) students based on the options in the department. A result of 0.78 was obtained which indicate that the result was reliable. The method of data analysis used is mean and standard deviation to answer the research questions. The findings of the study revealed that Lecturer's attitude influences mathematics education students performance in Science Education, Lecturer's attitude influences chemistry education students performance in Science Education. The study concluded that lecturer's attitude influences teaching and learning of Science Education which as a concept is concerned with an individual's way of thinking, acting and behaving. The study recommended that lecturers should always show positive attitude towards the students so that it can stimulate the interest of the students and also lecturers should always be punctual and friendly in the classroom with the student.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

The performance of students in tertiary institutions or learning environment cannot be determined except with a distinct education. Education is widely regarded as a basic human right, a key to enlightenment, and a source of wealth and power (Mugenda, 2017). Education is critical to industrial and technological development, with the history of developed nations bearing records of this, developing nations aspiring to realize the same status have to put a premium. UNESCO (1986) indicates that knowledge holds key to the attainment of the millennium development goals, which include, food security, eradication of child mortality, and reduction of the spread of HIV and AIDS among others. Ali (2009) observes that there was statistically significant relationship between teacher attitude and student academic achievement. Adeyemo (2005) notes teacher attitude influenced teaching and learning in classrooms. Olaleye (2011) establishes that there was relationship between teachers attitude and pupils performance. Gravestock & Gregor-Greenleaf (2008) states that the explanations for good or poor student's academic performance have been quite exhaustive yet controversy still exists among scholars as to what contribute singly or jointly to students' poor performance. The teacher attitude found to be dominant in cross-country studies are related to; qualification, experience, attitude and personality.

Attitude is an important concept in learning. Among learners, it denotes interest or feeling towards studying particular subjects. When motivational factors such as interest, attitude and aspiration are inculcated in the learners, they tend to spend more time studying the particular subject. Students understand better when they spend more time studying and will therefore achieve to expected standard (Twoli, Maundu, Muindi, Kiio

& Kithinji, 2007). This is only possible when they have a positive attitude towards a particular subject.

Akinsolu (2010) asserts that availability of qualified teachers determined the performance of students in schools. Coonen (2013) emphasizes that teachers involved in in-service training were more effective in classrooms as compared to teachers who had not undergone training. Wirth & Perkins (2013) indicate that teacher's attitude contributed significantly to student attention in classrooms whereas Adesoji & Olatunbosun (2008) illustrates that student attitude was related to teacher attitude. This therefore meant that teacher's attitude directly affected students' attitude. On teacher personality, Adu & Olatundun (2007) contend that teachers' attitude are strong determinants of students' performance in secondary schools.

Scholars and researchers generally are in agreement that the school variables, which include teacher administration, perform a critical role in educational achievement than other variables (Patrick, 2005). The important role of the teachers in the learning is unquestionable. Teachers have a lot of influence on their classroom practices. Teachers should have and apply specific abilities without which their influence may not be reflected in their students' performance in the subject. For students to be able to make connection between what is taught in school and its application in problem solving in real life, the teacher has to be effective in their teaching. There has been no consensus on the importance of specific teacher factors, leading to the common conclusion that the existing empirical evidence does not find a strong role for teachers in the determination of academic achievement.

Biology is the study of the structure, function, heredity, and evolution of all living things-microorganisms, fungi, plants, and animals. Secondary education prepares you to be a high school teacher. As biology education is perceived to be 'successful' in terms of the attainment and participation of students of the subject, it receives less attention from public policy makers compared to other branches of science education. Yet biology teachers face many of the same difficulties in terms of the constraints of formal assessment, continual change to syllabuses, and pressures of workload, with additional challenges of often teaching outside their specialism.

Biology education is not only expanding the frontiers of biological knowledge but creating new areas of knowledge, often in interdisciplinary areas. These areas of knowledge are represented by different organisations and individuals whose sometimes disparate views and voices can make it difficult for policy makers, teachers and others to make informed decisions about how to construct a meaningful biology curriculum for students.

In addition, reviews of, and changes to, the science curriculum are too often undertaken in a piecemeal fashion. The organisations responsible for setting tests and examinations have few incentives (and often limited opportunities) to engage with education research and have a tendency to resort to market-orientated priorities in the content of syllabuses and assessments. This threatens some topics in biology (particularly those that are less popular) and some activities (particularly those most difficult to assess). Biology education research could provide a framework within which coherent curriculum development can proceed.

Chemistry education (or chemical education) is the study of teaching and learning chemistry. Chemistry education can be improved by changing teaching methods and

providing appropriate training to chemistry instructors, within many modes, including classroom lectures, demonstrations, and laboratory activities. The relevance of chemistry education covers both intrinsic and extrinsic components. The intrinsic dimensions encompass student's interests and motives; the extrinsic dimension covers ethically justified expectations of the personal environment or from society at large towards the student.

Mathematics education has an important potential in improving individuals' creativity, reasoning and problem solving skills. Nowadays mathematics instruction requires people to gain some mathematical features: using mathematical rules/formulas properly, performing arithmetic operation, having a higher level mathematical thinking, and becoming a good problem solver. Of course, such trends/expectations depend on changes in both learners' and teachers' views of learning and teaching.

Science Education has been recognized as an important area of learning aimed at driving economies and technological transformation of any society. Therefore, the promotion of the subject is of paramount importance to the development of human kind. Science Education is an embodiment of knowledge, skills and procedures that can be used in a variety of ways. It can be used to describe, illustrate and interpret, predict, explain patterns and relationships in numbers in order to convey and clarify meaning of various issues in life (UNESCO, 2015). Developed nations seem to have very strong Science Education policies which have propelled them to higher heights of development. It appears that no country has attained any breakthrough in its economic development without the development of minimum Science Education base. However, in their advancement in the field of Science Education, schools are faced with the challenges of performance (Carroll, 2014).

As in the past, most people in Nigeria today still believe that Science Education is all about computation. However, computation, for mathematicians, is merely a tool for comprehending structures, relationships and patterns of mathematical concepts, and therefore producing solutions for complex real life problems. This perspective of mathematicians has gained more attention and importance with rapid advancements in information and communication technologies. It has become necessity for people of all ages to utilize, analyze, and apply the mathematical knowledge effectively and efficiently to be successful citizens in our information age. In particular, students need to be well-equipped with higher-order mathematical knowledge (Oyewole, 2016).

The quality of teaching and learning in Science Education is a major challenge for educators. General concern about Science Education performance has been evident for the last 20 years. The current debate among scholars is what students should learn to be successful in Science Education. The discussion emphasizes new teaching-aids design techniques to produce individuals who can understand and apply fundamental Science Education concepts. A central and persisting issue is how to provide instructional environments, conditions, methods, and solutions that achieve learning goals for students with different skill and ability levels. Innovative teaching-aids approaches and techniques should be developed to ensure that students become successful learners (Adegbite, 2015).

Most pronounced factor that influence teaching and learning of Science Education is attitude, which as a concept is concerned with an individual's way of thinking, acting and behaving (Olatunde, 2009). Moreover, it has very serious implications for the learner, the teacher, the immediate social group with which the individual learner relates and the entire school system. Attitudes are formed as a result of some kind of learning

experiences and may also be learned simply by following the examples or opinion of teachers, parents and learning situation (Smith, 2014).

Being successful in Science Education involves the ability to understanding one's current state of knowledge, build on it, improve it, and make changes or decisions in the face of conflicts. To do this requires problem solving, abstracting, inventing, and proving (Romberg, 2016). These are fundamental cognitive operations that students need to develop and use it in Science Education classes. Therefore, instructional strategies and methods that provide students with learning situations where they can develop and apply higher-order operations are critical for Science Education achievement.

Teachers not only need knowledge of a particular subject matter but also need to have pedagogical knowledge and knowledge of their students (Bransford *et al.,* 2014). Teacher competency in these areas is closely linked to student thinking, understanding and learning in Science Education education. There is no doubt that student achievement in Science Education education requires teachers to have a firm understanding of the subject domain and the epistemology that guides Science Education education as well as an equally meticulous understanding of different kinds of instructional activities that promote student achievement. Therefore, this study is designed to assess the influence of lecturers attitude on students performance in Science Education in Federal University of Technology Minna

1.2 Statement of the Problem

Science Education programs is to produce qualified teachers of Science Education for Schools. However, the general performance in Science Education among students of tertiary institutions has been poor for many years because of poor background knowledge of the students and poor attitude of teachers to the students (Olusegun,

2016). This has raised concern on quality of teachers and their inputs in the teaching and learning process.

Since teachers have been professionally trained to handle students' learning problems, whenever there is unsatisfactory performance, they are the immediate persons to be criticized. The teacher needs to make instructional judgements, respond to learning questions and manage the learning environment. Learning preparations analyze the identification of lessons objectives to be achieved and organization of learning tasks to be undertaken. Besides it allows for identification of the evaluation procedures to be applied during and after the lesson. It is the responsibility of the teacher to create an environment where Science Education achieved with the persistent low performance in it as earlier mentioned, the teachers' input into teaching of Science Education becomes suspected. Even schools with experienced and long-serving teachers also show low performance trends. This raises doubts on the quality of teachers' contributions to the learning process which should be reflected in instructional planning. No specific and precise guide to instruction has been used to facilitate students' understanding prior to instructional planning on students' engagement and understanding of Science Education concepts and skills (Adekanbi, 2014).

1.3 Aim and Objectives of the Study

The aim of the study is to assess the influence of lecturers attitude on students performance in Science Education in Federal University of Technology Minna. The objectives of the study are to;

1. determine how the lecturers attitude influences mathematics education students performance

2. determine how the lecturers attitude influences chemistry education students performance
3. determine how the lecturers attitude influences biology education students

1.4 Research Questions

The following research questions were raised to guide the study.

1. To what extent does the lecturers attitude influences mathematics education students performance in Science Education?
2. To what extent does the lecturers attitude influences chemistry education students performance in Science Education?
3. To what extent does the lecturers attitude influences biology education students performance in Science Education?

1.5 Scope of the Study

The study is to assess the influence of lecturers attitude on students performance in Science Education in Federal University of Technology Minna. The study cover 500 level students and lecturers in Science Education Department, session 2019/2020. The study is limited to on how the lecturers attitude influences mathematics education students performance, how the lecturers attitude influences chemistry education students performance and how the lecturers attitude influences biology education students.

1.6 Significance of the Study

This study is important to other researchers in other disciplines such as physics and computer education as a reference on studies concerning students' performance in mathematics. It is the sincere hope of the researcher that by going through this work, it will make mathematics teachers to help their students perform well in mathematics subject.

Lecturers will consider students' backgrounds before actual classroom teaching to know if the students have the basic concepts in particular unit of study in Science Education. Then teachers can be in a position to improve students' performance in Science Education. The study will also help future researchers (Postgraduates or institutions') to come with findings on students' performance in Science Education.

1.7 Definition of Terms

Performance: Accomplishing or achievement of specific goals, objectives set in any academic undertaking in basic Science Education.

Teachers attitude: This refers to the attributes and practices which contribute immensely to teacher success or failure. These are such as displaying fairness, having a positive outlook, being prepared, using a personal touch, possessing a sense of humor, possessing creativity, admitting mistakes, being forgiving, respecting students, maintaining high expectations, showing compassion, and developing a sense of belonging for students center around the theme of caring.

Students Attitude: This is the feelings or behaviour of Science Education students' towards learning Science Education

Influence: the capacity to have an effect on the character, development, or behaviour of someone or something, or the effect itself towards learning Science Education

Knowledge: facts, information, and skills acquired through experience or education; the theoretical or practical understanding of Science Education.

Gender: either of the two sexes (male and female), especially when considered with reference to social and cultural differences rather than biological ones.

CHAPTER TWO

2.0 LITERATURE REVIEW

The following headings are examined under the literature review;

2.1 Conceptual Framework

Concept of Teacher Attitude

The term "teacher attitude" can be referred to as qualities that can be measured with tests or derived from their academic or professional records. They indicate that teacher attitude does not generally refer to the direct observation of their influence on students' learning in terms of either students' test performance or teaching behaviors. Rather, the approaches dealt within the scope of this research are those that fall traditionally into the province of personnel psychology or personnel selection. This review deals with those attitude of teachers that might be identified and used in the initial hiring of teachers to increase their students' achievement. Ashton (1996) indicates that these attitude could include qualities of teachers that are viewed as personal– such as mental ability, age, gender – or as "experiential" – such as certification status, educational background, previous teaching experience and the like. Some attitude are combinations – in unknown amounts – of personal and experiential qualities, for example; candidates' performance on teacher-certification tests such as the national teacher examinations and state-mandated tests.

Teacher Qualification and Student Academic Achievement

Darling – Hammond (1998) defines well qualified teacher as one who was fully certified and held the equivalent of a major in the field being taught. Although the formal qualification of teachers is an important indicator for their knowledge and competence in teaching, it has only limited utility in analyzing how well prepared teachers are for what they have to teach in schools. More detailed knowledge of the

courses they have taken during their training needs to be compared to the actual content and skills required to teach the high school's curriculum. Ruthland & Bremer (2002) refer to teacher qualification in two ways - traditional and alternative qualification routes. Traditional certification is when an individual completes an undergraduate degree or post graduate program in education. Alternative routes of certification are based on coursework in pedagogy and subject area without a degree in education. Hardy & Smith (2006) cite short term activities such as mentoring, peer evaluations and workshops as ways other than formal qualifications for improving teaching. More often graduates teachers with first degree content go into teaching if they cannot find another job right away. Although they often get somewhat lower salary than a fully qualified teacher; they choose not to enroll in the one year post- graduate professional training and therefore lack a basic foundation for teaching.

Huang & Moon (2009) documents that teacher qualification accounted for approximately 40 to 60 percent of the variance in average of students' achievement in assessment. Richardson (2008) reveals that students in urban areas performed better than those in rural areas. The researcher suggests that the availability of enough qualified teachers must have been a determinant for students' performance. However, in Kenya, some schools in the rural areas have performed better than their urban counterparts (Owoeye & Yara, 2011). Maundu (1986) concludes that there was significant correlation between teacher qualification and pupil performance in Kenya. The good performance was attributed to excellent instructions given by qualified teachers in addition to other inputs. Maundu (1986) establishes that teachers who had graduated from Kenya Science Teachers College were more practically oriented than those who had degrees from public universities.

Wilson *et al*. (2001) suggest that even with the shortcomings of current teacher education and licensing, fully prepared and certified teaches are more successful with students than teachers without this preparation. Ashton (1996) notes that teachers with regular state certification receive higher supervisor ratings and student achievement than teachers who do not meet standards, but this observation was based on data with virtually no statistical controls having been imposed. In spite of the quantity of research on the benefits of teacher certification for student learning, little of the past research exercised controls over student "inputs" that would

give the critical reader confidence in the findings. Laczko & Berliner (2014) assert that the impact of certification status on student achievement in two large urban school districts in the United States of America. These school districts provided information about teachers hired for the 1998-1999 and 1999-2000 school years. Information included the school where they were currently teaching, the grade level taught, the teacher's certification status, highest degree earned, date and institution where it was achieved, age, and number of years teaching experience.

It has been evidenced that in many countries, teacher qualifications that are considered to be related to student learning have become desirable targets of teacher education reform. Some of these reforms call for the professionalization of teacher education by making it longer, upgrading it to graduate programs, and regulating it through mechanisms of licensure, certification, and promotion aligned with standards.

Attitudes of Students towards learning Science Education

Students attitude towards Science Education perceives it as a subject which is difficult and hate are common opinions among students that reflect their negative attitudes

towards mathematics. Apart from these opinions, other action tendencies that reflect negative attitudes in Science Education include, coming to class late, sleeping during the lesson and refusing to participate lesson. Students like any other person need approval, feeling of importance, security and independence. When these needs are meet, a student is likely to develop an interest in any activity (Nafungo, 2004). Students care more about how much a teacher towards you they look for more negative things in you, but if they are positive they look for more positive things in you (Ibid). Teachers are the most important agents that can influence students' attitude towards Science Education. Too much theoretical teaching of Science Education makes the subject appear too abstract and boring. Negative verbal commends from teachers towards students, ability in Science Education, discourages them (Ibid). Practical activities when adopted in mathematics instruction, motivates student. However, some fear doing a lot of work.

In the discipline of Science Education, individual concepts and relationships can be quite abstract, and at times can even represent a bit of a mystery to students, often students need to spend some time deducing and explaining these relationships to internalize those (Frank, 2016). In the field of Science Education, research on attitude has been motivated by the belief that "attitude" plays a crucial role in learning Mathematics (Neale, 2014). Teachers attribute students' difficulties with Mathematics to their attitude towards the subject nearly always (Polo and Zan, 2015). The causes of a negative attitude are generally ascribed to students' characteristics and behaviours, thus hiding the teacher's responsibility in building a view of Mathematics that elicits refusal, in the lack of interest and effort by students, in the image of the self that students construct (Hannula, 2013). Even when Science Education is perceived as

useful, this perception is not necessarily associated with a positive emotional disposition (Hannula and Philipou, 2014).

Teacher and Student relationship

According to Olagoke (2014) teacher and student relationship refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community, Although ideally it should be conceived of and organized as a seamless continuum, teacher education is often divided into the following stages. These are initial teacher training/education (a pre-service course before entering the classroom as a fully responsible teacher); induction (the process of providing training and support during the first few years of teaching as the first year in a particular school) teacher development or continuing professional development (CPD) an in-service process for practicing teachers.

Teachers' Attitude and Performance in Science Education

Njoroge (2014) carried a study on teaching methodology in secondary schools and explained that, teaching and learning of science and Science Education had been subject of debate for a long time. Attitude being one of the key components that determines implementation of curriculum, the debate centered on the teaching approach and methodology. They observe that one particular method that brings some dislike of the subject as traditional or teacher centered methods of teaching which results in learners not enjoying lessons and missing the benefits of discovering what they know on their own. This has led to the low achievement in examinations.

Sentiments echoed by Ade (2013) observe that some Science Education and Science teachers were still using lecture methods and students were given rigidly formulated

statements, which they had to memorize and regurgitate when required to do so by the teacher. In addition, little or no emphasis was placed on understanding. This made learners unable to conceptualize what was being taught in class and it led to the formation of negative attitude towards the subject. Bolaji (2015) in a study of the influence of students‟ attitude towards Science Education found out that the teachers‟ method of teaching Science Education and his personality greatly accounted for the students‟ positive attitude towards Science Education.

Teachers' Attitudes and Students' Motivation

Educationists and employers know that it is essential to motivate learners and employees so that they can work hard to produce good results in whatever they do (Kithinji 2007, as cited in Twoli *et al*., 2007). Teacher's attitude and motivation play a pivotal role in the teaching and learning process. They play a significant role in shaping the classroom environment which has an impact on a student's self efficacy which in turn influences a student's behaviour. All of these factors which can be loosely categorized as environment, personal factors, and behaviour interact and play off each other in a cyclical way (Woolfolk, 2007). According to Kwale SMASSE (2004), although science and mathematics teachers may have positive attitude, they are beset with problems that frustrate their efforts to teach effectively and efficiently. They play a significant role during the learning process and can directly or indirectly influence students' attitudes toward science which in consequence can influence students' achievement. Teachers are, invariably, role models whose behaviours are easily mimicked by students. What teachers like or dislike, appreciate or disapprove and how they feel about their learning or studies could have a significant effect on their students. By extension, how teachers teach, how they behave and how they interact with students can be more paramount than what they teach (Kwale SMASSE, 2004).

2.2 Theoretical Framework

Social Cognitive Theory (SCT)

The social cognitive theory is a learning theory that was based on the idea that people learn by observing others as formulated by Bandura in (1977). The Social Cognitive Theory (SCT) states that when people observe a model performing the behaviour, and the consequences of that behaviour, they remember the sequence of event and use this information to guide that behaviour. Social-Cognitive Theory is a theory used in psychology, education, communication and technology; it holds that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences.

The SCT believed that when people observe a model performing behaviour and the consequences of that behaviour, they remember the sequence of events and use this information to guide subsequent behaviours. Observing a model can also prompt the viewer to engage in behaviour they already learned. In other words, people do not learn new behaviours solely by trying them and either succeeding or failing, but rather, the survival of humanity is dependent upon the replication of the actions of others. Depending on whether people are rewarded or punished for their behaviour and the outcome of the behaviour, the observer may choose to replicate behaviour modeled.

SCT was referred to a psychological model of behaviour that emerged primarily from the work of Bandura (1977). Initially developed with an emphasis on the acquisition of social behaviours, SCT continues to emphasize that learning occurs in a social context and that much of what is learned is gained through observation. SCT has been applied broadly to such diverse areas of human functioning as career choice, organizational behaviour, athletics, and mental and physical health. SCT also has been applied

extensively by those interested in understanding classroom motivation, learning, and achievement. Bandura believed that humans can learn through observation without the need for imitation; learning could be either direct or indirect (vicarious) in that one could learn through observing others' behaviours and the consequences of those behaviours. Bandura (1977) posit that, the strict stimulus/response theory of behaviorism focuses too much on the learner's actual behaviour. He proposes that learning happens when we take observed behaviour and assimilate it into our own knowledge database.

Bandura proposed that the key factors that influence learning begin with the observation of others. Through observation of modeled behaviours, attitudes, emotional reactions, the learner makes decisions about how to act. However, this learning does not happen through a stimulus/response. Schun (2008) stated that, Bandura's Social-Cognitive Theory is considered a theory that focuses on learning in a naturalistic setting. It is this type of informal setting, in which learning happens in our daily lives, that is considered ripe with opportunities for learning through social venues. However, that doesn't imply that Bandura believed that all learning needed to happen in an unstructured environment. In fact, he asserts that learning is instructor managed and that the student is at the center of their learning process. The environment around the student provides the rich resource for observing behaviours and mentally cataloging these examples for future use in their own learning environments.

However the use of teaching models may be one of the most effective strategies for teaching and learning of Mathematics Education. This will involve the Mathematics Education teachers to first of all demonstrate the activities and then reward the students for their good responses. This is one of the ways of making and bringing learning closer to students and eventually, the learning may take place successfully. This behaviour

would attract the student to be fully engaged to the activity and as well arouses their interest in learning of Mathematics Education.

Constructivist Theory of Learning

Constructivism is a theory or set of interrelated doctrines and philosophies about learning in which learners construct their own knowledge out of their own experiences. Constructivism suggests that knowledge is not passively received either through the senses or any means of communication by learners, but is actively constructed by them (Perkins 2000). Rather than passive absorbers of information, learners are viewed as actively engaged in meaning-making, activating prior knowledge to bear or fit with new situations, and if warranted, adopting such knowledge structures (Perkins, 2000). Some researchers credit Immanuel Kant as the father of constructivist thought while others suggest constructivism can be traced to Socrates. Nonetheless, Wertsch (2001) discloses that various types of constructivism emerged but the two most common perspectives in Mathematics Education are cognitive and social constructivism.

2.3 Related Empirical Studies

Longitudinal research is favoured by edu- cational researchers who wish to study the effects of the factors at different levels upon student outcomes. However, a longitudinal three-level model is rare in developing countries, such as Nigeria. There are mostly cross-sectional studies, amongst which a three-level study of Thuku and Hungi (2005) as part of the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ) project. The results of this study showed that about 61.1%, 5.1% and 33.8% of the variance in Kenyan sixth-graders' Mathematics achievement was situated at student, class and school level, respectively.

Research has shown that a number of individual student characteristics are associated with student outcomes. According to Rumberger and Palardy (2004), these include demographics, family characteristics, and academic background. Mo- hammadpour (2012) categorises them into socio- economic, personal and attitudinal factors.

Howie (2006) found that family socio- economic status (SES) affects secondary students' performance in Mathematics in South Africa. However, Heyneman and Loxley (1983) argued that in low-income countries, SES makes little diff- erence in academic performance. Gender also significantly predicts MA. Gen- der differences in MA have been documented, with boys significantly outperforming girls (e.g. Kaahwa, 2012; Ochwo, 2013). Conversely, Namu- sisi (2010) has reported girls outperforming boys. However, in a meta-analysis of 100 studies, Hyde, Fennema and Lamon (1990) found no or very small gender difference in MA at the early primary level. But, some researchers (e.g. Hyde, Fennema, Ryan, Frost & Hopp, 1990; Karimi & Venkatesan, 2009; Opolot-Okurut, 2005) indicated that this trend seems to change in secondary school because girls show more Mathematics anxiety than boys.

Age has also been associated with achieve- ment. The Uganda National Examinations Board (2013) reported that the mean scores in Math- ematics of younger students in senior two (Grade Eight) were higher than those of their older counterparts within the same class. However, Ayotola and Adedeji (2009) reported that age had an insignificant negative correlation with MA of senior two students.

Studies have found that prior Mathematics achievement (PMA) is a good predictor of student's mathematical success (e.g. Hemmings, Grooten- boer & Kay, 2011). Ma (1996) has pointed out that PMA is the single predictor that is statistically significant across all grades.

The consensus among researchers is that parents can exert a positive influence on their children's mathematical performance (e.g., Mji & Makgato, 2006; Wamala, Kizito & Jjemba, 2013). In Uganda, Nsubuga (2008) observed that the role of parents, particularly through Parent-Teacher Association (PTA), was instrumental to students' learning achievement.

According to Smith (2014), family background influences student performance in mathematics, it is identified that students' cultural backgrounds differ and can affect students' influences to study mathematics. Furthermore, students from different cultural backgrounds are influenced differently based upon parental experiences, interests in mathematics and cultural views and attitudes of mathematics education. Additionally, Smith's research indicates that students who are studying higher-level mathematics are influenced differently as compared to students who are studying lower level mathematics or chose not to study mathematics at all.

2.4 Summary of Literature Reviewed

This chapter has presented the conceptual framework, theoretical framework and empirical studies that informed about the study. In conceptual framework the researcher has given out assumptions on factors that have an influence on student's performance in mathematics. These assumptions have been enlightened with theoretical and empirical literatures reviewed. It was noticed that students' performance is the function of teaching and learning methods, teachers'-students' relationship and school learning.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The study adopted a descriptive survey research design. A case study refers to the study of a particular case. In other words, case study is an indepth investigation of one phenomenon, one event, one place over an extended period of time (Denga and Ali, 1983).. This study sought the opinions of 500 level students on the influence of lecturers attitude on students performance in Science Education in Federal University of Technology Minna

3.2 Population of the Study

The population for this study comprises of students in Science Education department and Educational Technology Department, Federal University of Technology Minna. The total population used for this study is one hundred and eighty six (186) students, session 2019/2020 as shown in table 3.1 below.

Table 3.1: Distribution of Population

S/N	Department	Population
2	Science Education	90
3	Educational Technology	96
	Total	**186**

Source: Science Education and Educational Technology Department (2021)

3.3 Sample and Sampling Techniques

A purposive sampling technique was used to select Science Education Departments among the three department in School of Science and Technology Education. A simple random sampling technique was used to select the sample size of the study based on the options in the department as shown in table 3.2 below.

Table 3.2: Distribution of Population by Subjects

S/N	Science Education Department Options	Total
1	Mathematics	30
2	Biology	30
3	Chemistry	30
	Total	**90**

Source: Authors work (2021)

3.4 Instrument for data collection

Questionnaire was developed by the researcher based on the research question and purpose of study. The questionnaire was divided in to three (3) sections. Each section sought for data to answer related research questions. Four point rating scale was used as stated: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1.

3.5 Validation of the Instrument

After drafting the instrument was taken to two Senior lecturers in the Department of Science Education, Federal University of Technology Minna, Niger state. As well as the validate of this study and their comments was used to readjust the instrument.

3.6 Reliability of the Instrument

The reliability of the instrument was determined by selecting 15 students apart from each department of the selected sample to determine the reliability of the instrument using Cronbach alpha. A result of 0.78 was obtained which indicate that the result was reliable.

3.7 Method of Data Collection

After permission was sorted, copies of the questionnaire was directly administered to the respondents to be fill and data was collected and all copies will be retrieved and the responds of the students will be used to analyze the data.

3.8 Method of Data Analysis

During data analysis for this study, the researcher computes the mean, standard deviation of each items. Mean was used to answer the research question.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Research Question One

To what extent does the lecturers attitude influences mathematics education students performance in Science Education?

Table 4.1: Shows the mean responses extent does the lecturers attitude influences mathematics education students performance in Science Education

S/N	ITEMS	$\bar{X}$	SD	Remarks
1.	Lectures who do smile often using humor when appropriate make the student enjoy the courses their by improving their performances	2.54	1.27	Agreed
2.	Lecturers who do ask students periodically if they can hear and see everything makes the students love the courses	2.50	1.23	Agreed
3.	Lecturers that do move around the class room and use general gesture help students to understanding their courses	2.74	1.18	Agreed
4.	Lecturers that do interact with students to create positive rapport and make students to perform better	2.51	1.19	Agreed
5.	Lecturers do use questions to prompt the student think about how the course relate to their life this has been helpful to their performances	2.31	1.23	Disagreed
6.	Lecturers accommodate students questions and use them in class there by improving their performances	2.57	1.01	Agreed
7.	Lecturers do ask students for feedback and that make us to be active	2.52	1.17	Agreed
8.	The students have good feeling toward their courses when their lecturers are in the class there by improving their performances	2.70	1.37	Agreed
9.	Students are happier usually in the class when the lecturers entered their class	2.80	1.10	Agreed
10.	Lecturers coming late to lectures reduces students interest to learning the course	2.59	1.43	Agreed
11.	Lecturers like student coming to them with problem for assistance there by improving their performances	2.27	1.13	Disagreed
12.	Lecturers maintain regular eye contact with the entire class more helpful in their performances	2.54	1.27	Agreed
13.	Lecturers avoid turning away from students when lecturing there by improving their performances	2.74	1.18	Agreed
14.	Lecturers punctuality in the class help students in their performances	2.52	1.19	Agreed

15.	Lecturers do exploits students during practical class for materials	2.31	1.23	Disagreed
	Grand Average	**2.54**	**1.21**	**Agreed**

Decision=2.5

Table 4.1 revealed the results that lecturers attitude influences mathematics education students performance in Science Education based on the grand mean average (2.54).

4.2 Research Question Two

To what extent does the lecturers attitude influences chemistry education students performance in Science Education?

Table 4.2: Shows the mean responses of the respondent on the extent does the lecturers attitude influences chemistry education students performance in Science Education

S/N	ITEMS	$\bar{X}$	SD	Remarks
1.	Lectures who do smile often using humor when appropriate make the student enjoy the courses their by improving their performances	2.36	1.21	Disagreed
2.	Lecturers who do ask students periodically if they can hear and see everything makes the students love the courses	2.70	1.25	Agreed
3.	Lecturers that do move around the class room and use general gesture help students to understanding their courses	2.54	1.23	Agreed
4.	Lecturers that do interact with students to create positive rapport and make students to perform better	2.57	1.02	Agreed
5.	Lecturers do use questions to prompt the student think about how the course relate to their life this has been helpful to their performances	2.53	1.05	Agreed
6.	Lecturers accommodate students questions and use them in class there by improving their performances	2.77	1.08	Agreed
7.	Lecturers do ask students for feedback and that make us to be active	2.51	1.10	Agreed
8.	The students have good feeling toward their courses when their lecturers are in the class there by improving their performances	2.58	1.20	Agreed
9.	Students are happier usually in the class when the lecturers entered their class	2.46	1.09	Disagreed
10.	Lecturers coming late to lectures reduces students interest to learning the course	2.26	1.21	Disagreed

11.	Lecturers like student coming to them with problem for assistance there by improving their performances	2.70	1.25	Agreed
12.	Lecturers maintain regular eye contact with the entire class more helpful in their performances	2.53	1.05	Agreed
13.	Lecturers avoid turning away from students when lecturing there by improving their performances	2.57	1.10	Agreed
14.	Lecturers punctuality in the class help students in their performances	2.57	1.10	Agreed
15.	Lecturers do exploits students during practical class for materials	2.51	1.20	Agreed
	Grand Average	**2.54**	**1.14**	**Agreed**

Decision=2.5

Table 4.2 revealed that lecturers attitude influences chemistry education students performance in Science Education based on the grand average of 2.54.

4.3 Research Question Three

To what extent does the lecturers attitude influences biology education students performance in Science Education?

Table 4.3: Shows the mean responses of the respondent on the extent does the lecturers attitude influences biology education students performance in Science Education.

S/N	ITEMS	$\bar{X}$	SD	Remarks
1.	Lectures who do smile often using humor when appropriate make the student enjoy the courses their by improving their performances	2.64	1.02	Agreed
2.	Lecturers who do ask students periodically if they can hear and see everything makes the students love the courses	2.60	1.21	Agreed
3.	Lecturers that do move around the class room and use general gesture help students to understanding their courses	2.64	1.20	Agreed
4.	Lecturers that do interact with students to create positive rapport and make students to perform better	2.61	1.19	Agreed
5.	Lecturers do use questions to prompt the student think about how the course relate to their life this has been helpful to their performances	2.51	1.27	Agreed
6.	Lecturers accommodate students questions and use them in class there by improving their performances	2.67	1.01	Agreed
7.	Lecturers do ask students for feedback and that make us to be active	2.62	1.17	Agreed
8.	The students have good feeling toward their courses when their lecturers are in the class there by improving their performances	2.72	1.37	Agreed

9.	Students are happier usually in the class when the lecturers entered their class	2.81	1.10	Agreed
10.	Lecturers coming late to lectures reduces students interest to learning the course	2.53	1.43	Agreed
11.	Lecturers like student coming to them with problem for assistance there by improving their performances	2.68	1.02	Agreed
12.	Lecturers maintain regular eye contact with the entire class more helpful in their performances	2.48	1.01	Disagreed
13.	Lecturers avoid turning away from students when lecturing there by improving their performances	2.32	1.04	Disagreed
14.	Lecturers punctuality in the class help students in their performances	2.73	1.21	Agreed
15.	Lecturers do exploits students during practical class for materials	2.22	1.12	Agreed
	Grand Average	**2.59**	**1.15**	**Agreed**

Table 4.3 revealed that lecturers attitude influences biology education students performance in Science Education based on the grand average of 2.59.

4.4 Summary of Major Findings

1. Lecturers attitude influences mathematics education students performance in Science Education.

2. Lecturers attitude influences chemistry education students performance in Science Education.

3. Lecturers attitude influences biology education students performance in Science Education.

4.5 Discussion of Results

The results revealed that lecturers attitude influences mathematics education students performance in Science Education based on the grand mean average (2.54). The findings of the study is inline with Njoroge (2014) carried a study on teaching methodology in secondary schools and explained that, teaching and learning of Science Education had been subject of debate for a long time. Attitude being one of the key

components that determines implementation of curriculum, the debate centered on the teaching approach and methodology. They observe that one particular method that brings some dislike of the subject as traditional or teacher centered methods of teaching which results in learners not enjoying lessons and missing the benefits of discovering what they know on their own. This has led to the low achievement in examinations.

Sentiments echoed by Ade (2013) observe that some Science Education and Science teachers were still using lecture methods and students were given rigidly formulated statements, which they had to memorize and regurgitate when required to do so by the teacher. In addition, little or no emphasis was placed on understanding. This made learners unable to conceptualize what was being taught in class and it led to the formation of negative attitude towards the subject.

The result revealed that lecturers attitude influences chemistry education students performance in Science Education based on the grand average of 2.54. The findings of the study corroborate with Bolaji (2015) in a study of the influence of students‟ attitude towards Science Education found out that the teachers‟ method of teaching Science Education and his personality greatly accounted for the students‟ positive attitude towards Science Education. It also agreed with Olagoke (2014) teacher and student relationship refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community, Although ideally it should be conceived of and organized as a seamless continuum.

The result revealed that lecturers attitude influences biology education students performance in Science Education based on the grand average of 2.59. The findings of the study is inline with Neale (2014), Teachers attribute students' difficulties with

Mathematics to their attitude towards the subject nearly always (Polo and Zan, 2015). The causes of a negative attitude are generally ascribed to students' characteristics and behaviours, thus hiding the teacher's responsibility in building a view of Mathematics that elicits refusal, in the lack of interest and effort by students, in the image of the self that students construct (Hannula, 2013). Even when Science Education is perceived as useful, this perception is not necessarily associated with a positive emotional disposition (Hannula and Philipou, 2014).

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study assessed the influence of lecturers attitude on students performance in Science Education in Federal University of Technology Minna. The specific objectives of the study was to determine how the lecturers attitude influences mathematics education students performance, determine how the lecturers attitude influences chemistry education students performance and to determine how the lecturers attitude influences biology education students. Three corresponding research question were raised to guide the study. The total population used for this study is two hundred and ninety six (296) students, session 2019/2020. A purposive sampling technique was used to select Science Education Departments among the three department in School of Science and Technology Education.

5.2 Conclusion

The study concluded that lecturers attitude influences teaching and learning of Science Education which as a concept is concerned with an individual's way of thinking, acting and behaving. Moreover, it has very serious implications for the learner, the lecturers, the immediate social group with which the individual learner relates and the entire school system. Attitudes are formed as a result of some kind of learning experiences and may also be learned simply by following the examples or opinion of teachers, parents and learning situation.

5.3 Recommendations

Based on the findings of the study, it was recommended that;

1. lecturers should always show positive attitude towards the students so that it can stimulate the interest of the students
2. lecturers should always be punctual and friendly in the classroom with the student
3. Lecturers should avoid turning away students when lecturing there by improving their performances.
4. Lecturers should interact with students to create positive rapport and make students to perform better

5.4 Contribution to Knowledge

The study contributed to lecturers positive attitude to improve student performance. The study also make the lecturers have good rapport with the students.

5.5 Suggestion for Further Studies

Assessment of teachers attitude to increase the performance of students in Bosso Local Government Minna, Niger State.

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APPENDIX A

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA. NIGER STATE

SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION

DEPARTMENT OF SCIENCE EDUCATION

QUESTIONNAIRE ON INFLUENCE OF LECTURERS ATTITUDE ON STUDENTS PERFORMANCE IN SCIENCE EDUCATION DEPARTMENT IN FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

BIO DATA

INTRODUCTION: please kindly complete this questionnaire by ticking (√) the column that best represent your perception about the items. The questionnaire is for research purpose and your view will be confidentially and strictly treated for the purpose of this research work only.

Respond options are: Strongly Agree = SA, Agree = A, Disagree =D, Strongly Disagree = SD

Students

Mathematics	**Biology**	**Chemistry**
☐	☐	☐

SECTION A

To what extent does the lecturers attitude influences students performance in Science Education?

S/N	ITEMS	SA	A	D	SD
1	Lectures who do smile often using humor when appropriate make the student enjoy the courses their by improving their performances				
2	Lecturers who do ask students periodically if they can hear and see everything makes the students love the courses				
3	Lecturers that do move around the class room and use general gesture help students to understanding their courses				
4	Lecturers that do interact with students to create positive rapport and make students to perform better				
5	Lecturers do use questions to prompt the student think about how the course relate to their life this has been helpful to their performances				
6	Lecturers accommodate students questions and use them in class there by improving their performances				
7	Lecturers do ask students for feedback and that make us to be active				
8	The students have good feeling toward their courses when their lecturers are in the class there by improving their performances				
9	Students are happier usually in the class when the lecturers entered their class				
10	Lecturers coming late to lectures reduces students interest to learning the course				
11	Lecturers like student coming to them with problem for assistance there by improving their performances				
12	Lecturers maintain regular eye contact with the entire class more helpful in their performances				
13	Lecturers avoid turning away from students when lecturing there by improving their performances				
14	Lecturers punctuality in the class help students in their performances				
15	Lecturers do exploits students during practical class for materials				