

Influence of Psychosocial Environment on Students' Achievement in Basic Electricity in Government Technical Colleges in Niger State, Nigeria

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Abstract

The purpose of the study was to investigate the Influence of Psychosocial Environment on Students' Academic Achievements in Basic Electricity in Government Technical Colleges in Niger State. Population of the study comprised all the teachers and students of Basic Electricity in Government Technical Colleges in Niger State. The sample of the study consisted of 295 made up of 29 teachers and 266 students. The researchers selected the respondents through simple random sampling technique. The study adopted ex-post facto research design. The instrument used for data collection was structured questionnaire. Pearson's Correlation were used to analyze the data for answering research questions while correlation Analysis was used to test the hypotheses of no significance difference at 0.05 level of significance. The study found that, there is direct positive teacher - students' relationship , high positive students'-students' , direct negative teacher- students' involvement, high positive Teacher- student Basic Electricity Task orientation, direct negative students'- students' competition, direct negative Teacher- students classroom management as an influence on academic achievement in Basic

Electricity. It was recommended that more task orienting exercises should equally be organized for Basic Electricity students to keep them more socially related as well as up competing. This could be achieved organizing quizzes, group work, individual and group presentations.

Keywords: Psychosocial environment; Academic Achievement; Basic Electricity; Technical Colleges

INTRODUCTION

Effective teaching and learning is the only means through which technical college students can acquire knowledge and develop skills for employment. There are many factors which contribute to effectiveness of learning. Such factors, Abe (2005) mentioned as physical environment, psychological environment, sociological environment and psychosocial environment. Among these factors the author stated that psychosocial environment is considered the most important factor. According to Haertel and Walbeg (2007), psychosocial environment is a type of environment that has to do with interaction in the classroom. This interaction involves teacher and student interaction, student and student interaction, teacher student and instructional material interaction. In the opinion of Anderson (2007) psychosocial environment is the interpersonal relationship among students, between students and their teacher, between students and subject matters studied and method of learning in the classroom. Therefore, psychosocial environment is a type of environment that promotes desirable patterns of social interaction and communication as well as psychological comfort and stability among technical college students, their relationship with the environment and their teachers. Abe (2005) noted that it is possible to perceive the totality of human as being guided by psychosocial environment. Apart from supporting human functioning, the psychosocial environment must also accommodate the equipment, tools and materials for effectiveness of teaching and learning in technical colleges.

Technical colleges also known as trade schools are educational institutions that prepare students for career in a specific fields. Technical colleges are institutions that provide students through training relevant and adequate knowledge, skills and attitude for employment, (National Board for Technical Education (NBTE), 2003). In other words, Technical College is one of the post primary educations where learners are prepared with appropriate skills, knowledge and attitude. Technical colleges in Nigeria are established to produce craftsmen and master craftsmen at the advanced craft level. The courses offered at the technical colleges lead to the award of National Technical Certificate (NTC) and Advanced National Technical Certificate (ANTC). In contemporary Nigeria, greater emphasis is placed on industrial and technological

development. As such, one subject that cuts across the entire engineering and related technical subjects is Basic electricity.

Basic Electricity in technical colleges is a subject that prepares students with entry level knowledge to enable them to do better for all subject offers in the field of electricity/electronics. According to Shepherd, Morton and Spence (2000) Basic Electricity is a physical science course which deals with the study of charged elementary particles and the energy associated with them. Similarly, Ogbu (2010) described Basic Electricity as a process that deals with all the fundamental issues of current electricity static-electricity and electronics, studied in the school and colleges. Therefore, Basic Electricity is the fundamental subject of study in the field of electricity and electronics that is taught in technical Colleges. Omosewe (2008) ascertained that in science and technical education programmes, students need to be encouraged to learn not only through their ears, but should be able to use their eyes and hands to manipulate equipment, devices to acquire skillful knowledge through the use of classroom and laboratory.

Classroom is an important place in the operation of a school. It holds students together and offers them the opportunities of achieving the purpose of education. Talton and Simpson (2004) described classroom environment as a miniature community in which member's interest influences the behavior of others. The Author further stated that classroom environment is a types of environment created as a result of subsequent interactions that occur in the classroom during the teaching and learning process. This shows that classroom environment teacher/student relationship is very important.

Teacher-Student relationship is a form of relationship that occur between the teacher and student which can be expressed as friendship, affection, co operation and open communication. According to Hughes and Chen (2011) Teacher-student relationship forms the basis of the social context in which learning take place. In the same vein Liberante (2012) stated that Teacher-student relationship is not only efficacious but it forms the basis of social context in which learning occur. Literature is replete with evidence that strong and supportive relationship between teachers and students are fundamental to the healthy development of all students in school (Hamre and Pianta 2004). Therefore, teacher student-relationship contributes to both academic and socio-emotional development. As such, teacher student- relationship provides a unique entry point for educator and others working to improve the social and learning environments of schools and classrooms. Teacher-student relationship provides the foundation for successful adaptation to the social and academic environment (Mucherah 2008).The author further explained that, from the first day of school, students must rely on teachers to provide them with the understanding and support

that will enable them to perform very well in basic electricity. Students who form close relationship with teachers enjoy school more and get along better with peers (Ryan, Stiller, & Lynch, 1994). Positive relationships with teachers can also serve as a secure base for student. Hence, the teachers-student relationships help maintain students interest's in academic and social pursuits, which in turn lead to better grades and more positive student-student relationship.

Students' relationship refers to the influence exerted by a peer group; it encourages a person to change his/her attitudes, values in order to conform to group norms. According to Sher and Trull (1994) Student-student relationship is a relationship that deals with exchange of information and ideas that occurs among students. Similarly, Mgboro and Omebe (2010) stated that student-student relationship is a form of relationship that involves the peer group. Sher and Trull (1994) explained further that peer group is a group of individuals who are of approximately equal size, age and status with whom the student find him in the same class. According to Kirk (2009), peer group is small group of similarly age, fairly close friends, sharing the same activities. The peer group is the first social group outside the home in which the child attempts to gain acceptance and recognition. According to Onyehalu (2004) a child relies on peers for social acceptances support and solidarity. Therefore, it can be inferred from the definition that student-student relationship can be experienced through group discussion, group assignments and collaborative knowledge where students become more analytic in conversation particularly when teachers involve students in learning.

Student involvement in the basic electricity is the act of sharing in activities of lessons in the classroom. The more teachers involve students in a lesson the higher the expectation of learning outcome (Teoh and Mille, 2013) Students involvement in basic electricity is a key component of educationally relevant activities for the attainment of learning outcomes. In these vain Kuh (2008) stated that student involvement in educationally purposeful activities is positively related to the academic outcomes. According to Krause, Bochner and Duchesne (2006), when teachers are able to involve the students, then learning becomes enjoyable experience taking place in balanced atmosphere. In line with this assertion, Chikering and Gamson (2014) stressed the importance of student involvement for good practice in technical education. Teachers who involve their students are more likely to have higher levels of career success, occupational competency; task oriented and better educational outcomes.

Teacher task orientation is a key behavior that refers to how much classroom time the teacher devotes to the task of teaching. Task orientation is a process that focuses on the particular lesson that involves goals and activities that are prepared to enhance

student comprehension of identified concept, skill or value (Dyngneson, 2009). They further stated that the more uninterrupted minute spent concentrating on a learning task, the higher the possibility of learning success. Similarly, Hammer, Grigsby and Woods (2010) stated that task orientation focus on the particular task as a measure of success. This means that task orientation is an important aspect of effective teaching because it relates to how much time the teachers actually spend on a designated instructional task.

Student competitions are a type of competition that provides a forum to stimulate the students' natural curiosity about learning new things. Student competition can teach students how to succeed and also how to fail, that is, how to face their failure, learn from their failure and subsequently, grow as a person and improve in performance. According to Davis and Rim (2004) Student competition can promote high level of achievement and productivity. The author further stated that some students need to compete with one another in order to push themselves to produce at high level. Therefore, Bishop and Walters (2007) stated that students competition increase their abilities to be leader in the classroom. This means that student competition can provide motivation for students to study and learn new information or strengthen previously learned material so that they will be ready to compete with their peers in their classroom and outside the classroom. Bishop and Walters (2008) stated that students' competition teach the students how to study, how to communicate, and how to effectively manage classroom challenges.

Classroom management is the process by which teachers and schools create and maintain appropriate behavior of student in a classroom setting. The purpose of classroom management is to enhance prosocial behavior and increase student academic engagement (Emmer and Saborine, 2015). Similarly, Hinson and SardoBrown (2003) stated that classroom management refers to all those essential activities which are highly necessary not only to create but also to maintain a supportive and orderly atmosphere. It includes planning and preparation of teaching and learning materials, organization of materials, decoration of the classroom, creation of expectation, establishment and enforcement of rules and routines in the classroom. However, Froyen and Iverson (2007) stated that classroom management will increase teacher efficacy, improved students' behavior and contribute to enhanced academic achievements of students.

Student achievement has become a hot topic in educational circle, especially with increased accountability for classroom teachers. Hornby (2010) stated that achievement is the ability of somebody to gain or reach a set goal through effort, skill or courage. It implies the art or process of finishing something successfully. Success then, in the area of academics is what is referred to as academic achievement, usually

assessed with achievement tests. In other words achievement test is designed to measure a person's level of skill, accomplishment or knowledge in a specific area. Therefore, student achievement in basic electricity is systematic and purposeful qualification of students' cognitive learning outcomes. This systematic qualification of acquired knowledge and skills is based on taught curriculum content either for the end of each term, each year or for the end of the three-year programme. At the end of the three- year programme, a systematic and purposeful skill and cognitive knowledge is acquired or achieved that is, final achievement test or examination is always conducted by the National Business and Technical examination Board (NABTEB).The examination for basic electricity and other electrical trade subjects is specifically called National Technical Certificate (NTC) Examination by NABTEB.

Unfortunately students' academic achievement in the certificate examination at the Niger State Technical Colleges has been consistently poor since the year 2005 in basic electricity and other electrical/electronic subjects (NABTEB, 2006). Aina (2006) observed that this failure rate had persisted for the past ten years. Stakeholders such as Parent Teacher Association (PTA), old student association have advanced reasons for this negative development in education in the state among which, improper classroom interaction among teacher and student, teacher aggressiveness, bullying on the part of the student and basic electricity task orientation have been examined to be the major factor responsible for persistent failure in basic electricity (Babasale, 2009).

Although many factors could be responsible for students' poor academic performance in any subject, it is a known fact that the instructional system headed by a teacher is the chief factor which can encourage or hinder learning and the attendant academic achievement. Teacher being the head of instructional system is the focal point of the teaching – learning scene and his/her role is capable of improving or retarding students learning and academic achievement. Formerly teacher experienced used to count as factor in enhancing students' achievement. Unfortunately the blame for poor students' achievement has not exempted the highly experience teachers. Being that there had been loud cry against commonly observed improper classroom interaction between teachers and students in technical colleges (e.g. Oyelami, 2008), there is need to investigate the influence of psychosocial environment on student achievement in basic electricity. Effective teaching using psychosocial environmental patterns is a disposition whereby the teacher consciously and skillfully plans and executes every one of his lesson so that interaction patterns are plausibly and effectively applied in each lesson delivery. By this disposition, the teacher ensures that only the advantages of each classroom interaction pattern is fully tapped skillfully skipping their

disadvantages. The question is; can psychosocial classroom environment influence student academic achievement in basic electricity?

METHOD

The study adopted ex-post facto research design. Ex-post facto research design is considered suitable for the study since the study is on influence and it will obtain data from the basic electricity Teachers and basic electricity Students on how their psychosocial classroom environment look like in Niger State. The study was carried out in Niger State in the North Central Zone of Nigeria. This state was chosen because it is a cosmopolitan State very close to Abuja. The population for the study was 631 comprising 302 TC11Students, 299 TC111Students and 29 electrical/electronics teachers in Niger State. The population for the study covers seven government technical colleges offering basic electricity. The sample for the study was 295 respondents made up of 266 students and 29 teachers. The researchers randomly selected 50% of the respondent to ensure that each member of the population as an equal probability of being selected. The instrument for data collection was a structured questionnaire. The questionnaire items were adapted using catholic school classroom environment questionnaire (CSCEO) and what is happening in the class questionnaire (WIHIC) developed by Dorman (2009). The instrument had 66 questionnaire items, made up of seven sections: A, B, C, D, E, F, and G. Each section has 11 items; Section A elicited information from respondents on personal data of the respondents. Section B elicited information on Teacher-Student Relationship. Section C is formulated to elicit information on Student-Student Relationship. Section D is designed to find out Teacher-Student involvement in basic electricity. Section E formulates to find out Basic Electricity Task orientation. Section F is to find out Student-Student competition. Sections G designed to find out teacher-classroom management on student achievement in Technical Colleges. A four point response mode was used to determine the psychosocial environmental influence on student achievement in basic electricity. The response categories for questionnaire item for section , B, C, D, E, F, and G are always(AI), often (OF), seldom(SL) never and (NV), scoring 4, 3, 2, and 1 respectively. To ensure the validity of the instrument, the structured questionnaire was subjected to face validation by three experts. The instrument was pilot tested in Kogi State on representative sample of 40 TC11 and TC111 Basic Electricity students randomly drawn from two Technical Colleges. Cronbach alpha was used to determine the internal consistency of the items from the piloted data obtained. Their responses were computed using statistical package for social science (SPSS) 16 versions. The reliability coefficient value for section A; teacher-student relationship on student academic achievement was 0.92, coefficient

value for section B; student-student relationship on student academic achievement was 0.93, coefficient value for section C; teacher-student involvement on student academic achievement was 0.93, coefficient value for section D; basic electricity task orientation on student academic achievement was 0.95, coefficient value for section E; student-student competition on student academic achievement was 0.95, coefficient value for section F; teacher-classroom management on student academic achievement was 0.89. The overall reliability coefficient of 0.98 was obtained for the total sections. Copies of the questionnaire were administered through personal contact with respondents with the help of three research assistants. A total of 295 copies of questionnaire item were distributed; out of which 29 were teachers of basic electricity and 266 for basic electricity students both TCII and TC111. Data collected from the respondents were analyzed using correlation Co-efficient to answer six research questions. The six null hypotheses were tested using Correlation analysis at 0.05 level of significance. Based on the four likert scales, items with mean of 2.50 or above were regarded as positive or agree while items with Mean below 2.50 were regarded negative or disagree.

RESULT

Research Question 1: What is the teacher-student relationship of classroom psycho-social environment on students' academic achievement?

The research question was answered using Pearson's correlation co-efficient(r) to correlate the relationship between the teacher and students' of classroom psychosocial environment on student academic achievement in basic electricity.

Table 1: Pearson's Product Moment Correlation Analysis for the relationship between teacher and students' on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
Teacher (T)	56.14	13.96	29	0.73	0.01
Students' (S)	39.18	10.99	266		

R² = coefficient of determination, F= f calculated, sig = significant value

To answer this research question, the scores from the responses between teachers were correlated with students' of classroom psycho-social environment on student academic achievement in basic electricity. The result in Table 1 shows that the correlation coefficient obtained was 0.73 This means that, there exist a high positive

relationship between teacher and students' relationship on students' academic achievement in basic electricity. Table 1 also shows that, the coefficient of determination (R^2) associated with the correlation coefficient of 0.73 was 0.01. This coefficient of determination (R^2) indicates that, 1% of teacher and students' relationship of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 99% of the variation on students' academic achievement in basic electricity is attributed to other factors other than teacher students' relationship.

Hypothesis 1

H₀₁: There is no significant relationship between the opinion of teacher and students' relationship on students' academic achievement in basic electricity

Table 2: Correlation Analysis of teacher and students' relationship on students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
Correlaion	166.075	1	16.075	151.37	0.00
Residual	31823.263	264	.043		
Total	31989.338	265			

$\alpha = 0.05$

In order to test hypothesis 1, correlation analysis was used. The result in Table 2 shows that an F-ratio of 151.37 with associated exact probability value of 0.00 was obtained. This probability value of 0.00 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.00 is less than 0.05. The null hypothesis which stated that; there is no significant relationship between the opinion of teacher and students' on students' academic achievement in basic electricity was rejected and inference drawn was that, teacher and students' relationship significantly determines students' academic achievement in basic electricity. In other words, there is significant relationship between the opinion of teacher and students' on students' academic achievement.

Research Question 2: What is the student-student relationship of classroom psycho-social environment on students' academic achievement?

The research question was answered using Pearson correlation co-efficient(r) to Correlate the relationship between the TC11 students 'and TC111students' of classroom Psychosocial environment on student academic achievement in basic electricity.

Table 3: Pearson's Product Moment Correlation Analysis for the relationship between TC11 students' and TC111 students' on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
TC11 Students' Basic electricity (TCSBC)	79.65	10.55	151	0.79	0.06
TC111Students'Basic electricity (TCSBE)	39.18	10.99	115		

R² = coefficient of determination

To answer this research question, the scores from the responses between TC11 students' were correlated with TC111 student's of classroom psychosocial environment on students' academic achievement in basic electricity. The result in Table 3 shows that the correlation coefficient obtained was 0.79. This means that, there exists a high positive relationship between TC11student and TC111students' on students' academic achievement in basic electricity. Table 3 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of 0.79 was 0.06. This coefficient of determination (R²) indicates that, 6% students-students' relationship of classroom psychosocial environment accounted for the increase on students' academic achievement in basic electricity. This is an indication that 94% of the variation in students' academic achievement in basic electricity is attributed to other factors other than students- students' relationship.

Hypothesis 2

H₀₂: There is no significant relationship between the opinion of TC11students'and TC111 students' relation on students' academic achievement in basic electricity

Table 4: Correlation Analysis of students- students' relationship on students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
Correlation	186.697	1	186.692	.150	.85
Residual	31802.647	264	120.465		
Total	31989.338	265			

$\alpha = 0.05$

In order to test hypothesis 2, correlation analysis was used. The result in Table 4 shows that an F-ratio of .150 with associated exact probability value of .85 was obtained. This probability value of .85 was compared with 0.05 set as level of

significance for testing the hypothesis and it was found to be no significant because .85 is higher than 0.05. The null hypothesis which stated that; there is no significant relationship between the opinion of TC11students'and TC111 students' relation on students' academic achievement in basic electricity was accepted and inference drawn was that, students' students' relationship does no significantly influence students' academic achievement. In other words, there is a no significant relationship between the opinion of TC11 students 'and TC111students' relation on students' academic achievement.

Research Question 3: What is the teacher-student involvement of classroom psycho-social environment on students' academic achievement?

The research question was answered using Pearson correlation co-efficient(r) to correlate the relationship between teacher and students' involvement of classroom psychosocial environment on student academic achievement in basic electricity.

Table 5: Pearson's Product Moment Correlation Analysis between teacher and students' involvement on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
Teachers (T)	4.00	0.60	29	-0.57	0.87
Students' involvement in Basic electricity (SIBE)	0.36	0.12	266		

R² = coefficient of determination

To answer this research question, the scores from the responses of teachers of classroom psychosocial environment were correlated with student's involvement in basic electricity on students' academic achievement. The result in Table 5 shows that the correlation coefficient obtained was -0.57 this means that there exist a direct negative relationship between teacher students' involvement on students' academic achievement. Table 3 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of -0.57 was 0.87 This coefficient of determination (R²) indicates that, 87% of teachers in classroom psychosocial environment accounted for decrease in students' academic achievement in basic electricity. This is an indication that 13% of the variation in students' academic achievement in basic electricity is attributed to other factors other than teacher students' relationship.

Hypothesis 3

H₀₃: There is no significant relationship between the opinion of teacher and students' involvement on students' academic achievement in basic electricity

Table 6: Correlation Analysis of teacher and students' involvement on students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
Correlation	27.0064	1	27.064	0.224	0.01
Residual	31962.275	264	121.09		
Total	31989.338	265			

$\alpha = 0.05$

In order to test hypothesis 3, correlation analysis was used. The result in Table 6 shows that an F-ratio of 0.224 with associated exact probability value of 0.01 was obtained. This probability value of 0.01 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.01 is less than 0.05. The null hypothesis which stated that; there is no significant relationship between teacher and students' involvement on students' academic achievement in basic electricity was rejected and inference drawn was that, teacher and students' involvement is significantly determines students' academic achievement in basic electricity. In other words, there is significant relationship between teacher and students' involvement on students' academic achievement.

Research Question 4: What is the Teacher-Student Basic electricity task orientation of classroom psycho-social environment on students' academic achievement?

The research question was answered using Pearson correlation co-efficient (r) to correlate the relationship between basic electricity Teacher task orientations of classroom psychosocial environment and students on students' academic achievement in basic electricity.

Table 7: Pearson's Product Moment Correlation Analysis between Teacher task orientation and Students' Basic electricity on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
Teachers Task orientation (TTO)	4.00	0.44	29	-0.21	0.45
Students' Basic electricity (SABE)	0.36	0.12	266		

R² = coefficient of determination

To answer this research question, the scores from the responses of Teacher task orientation of classroom psychosocial environment were correlated with Student in basic electricity on students' academic achievement. The result in Table 7 shows that the correlation coefficient obtained was -0.21 This means that, there exist a high positive relationship Teacher Task orientation and student in Basic Electricity on students' academic achievement. The table also shows that, the coefficient of determination (R^2) associated with the correlation coefficient of -0.21 was 0.45 This coefficient of determination (R^2) indicates that, 45% of Teacher task orientation of classroom psychosocial environment accounted for students' in basic electricity on academic achievement. This is an indication that 55% of the variation in students' academic achievement in basic electricity is attributed to other factors other than Teacher task orientation.

Hypothesis 4

H₀₄: There is no significant relationship between the opinion of teacher and students' basic electricity task orientation on students' academic achievement in basic electricity

Table 8: Correlation Analysis of Basic Electricity Task Orientation and students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
Correlation	217.628	1	217.628	1.808	0.02
Residual	31771.711	264	120.347		
Total	31989.338	265			

$$\alpha = 0.05$$

In order to test hypothesis 4, correlation analysis was used. The result in Table 8 shows that an F-ratio of 1.808 with associated exact probability value of 0.02 was obtained. This probability value of 0.02 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.02 is less than 0.05. The null hypothesis which stated that; there is no significant relationship between the opinion of teachers and students' basic electricity task orientation on students' academic achievement in basic electricity was rejected and inference drawn was that, Teachers and Students 'basic electricity task orientation is significantly influence students' academic achievement in basic electricity . In other words, there is a significant relationship between the opinion of teachers and students' basic electricity task orientation on students' academic achievement.

Research Question 5: What is the student-student competition of classroom psychosocial environment on students' academic achievement?

The research question was answered using Pearson correlation coefficient (r) to correlate the relationship between the TC11 students' and TC11 students' of classroom psychosocial environment on student academic achievement in basic electricity.

Table 9: Pearson's Product Moment Correlation Analysis for the relationship of classroom competition between TC11 student and TC11 students' on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
TC11 Students' (TCS)	52.17	13.79	151	-0.08	0.23
TC111 Students' Basic electricity (TCSBE)	39.18	10.99	115		

R² = coefficient of determination

To answer this research question, the scores from the responses of classroom competition of TC11 student's were correlated with TC11 students' on academic achievement in basic electricity. The result in Table 9 shows that the correlation coefficient obtained was -0.08. This means that, there exists a direct negative relationship between competition of TC11 students' and TC11 students' on students' academic achievement. Table 9 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of -0.08 was 0.23. This coefficient of determination (R²) indicates that, 23% of TC11 students' and TC11 students' competition of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 77% of the variation on students' academic achievement in basic electricity is attributed to other factors other than students' students' competition.

Hypothesis 5

H₀₅: There is no significant relationship between the opinion of TC11 students' and TC11 students' competition on students' academic achievement in basic electricity.

Table 10: Correlation Analysis of students' students' competition on students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
correlation	204.002	1	204.002	1.694	0.19
Residual	31785.336	264	120.399		
Total	31989.338	265			

$\alpha = 0.05$

In order to test hypothesis 5, correlation analysis was used. The result in Table 10 shows that an F-ratio of 1.694 with associated exact probability value of 0.19 was obtained. This probability value of 0.19 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be no significant because 0.19 is higher than 0.05. The null hypothesis which stated that; there is no significant relationship between TC11students'and TC111students' competition on students' academic achievement in basic electricity was accepted and inference drawn was that, students' students' competition is does not significantly influence students' academic achievement in basic electricity . In other words, there is a no significant relationship between the opinion of TC11 students' and TC111 students' competition on students' academic achievement.

Research Question 6: What is Teacher-Student classroom management on students' academic achievement?

The research question was answered using Pearson correlation co-efficient(r) to correlate the relationship between the Teacher and Student classroom management of classroom psychosocial environment on student academic achievement in basic electricity.

Table 11: Pearson's Product Moment Correlation Analysis for the relationship between Teacher and Student classroom management on students' academic achievement in basic electricity

Variable	\bar{x}	SD	N	r	R ²
Teacher Classroom Management (TCM)	53.54	13.79	266	0.02	0.00
Students' in Basic electricity (STC)	39.18	10.99			

R² = coefficient of determination

To answer this research question, the scores from the responses of the teacher classroom management were correlated with students' in basic electricity on students' academic achievement. The result in Table 11 shows that the correlation coefficient obtained was 0.02. This means that, there exist a direct negative relationship between Teacher classroom management and students 'on academic achievement. Table 11 also shows that, the coefficient of determination (R^2) associated with the correlation coefficient of 0.02 was 0.00. This coefficient of determination (R^2) indicates that, 100% of Teacher classroom management of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 100% of the variation in students' academic achievement in basic electricity is attributed to other factors other than classroom management.

Hypothesis 6

H₀₆: There is no significant relationship between the opinion of Teachers and Students classroom management on students' academic achievement in basic electricity

Table 12: Correlation Analysis of classroom management and students' academic achievement

Model	Sum of Squares	Df	Mean Square	F	Sig.
Correlation	9.283	1	9.283	0.08	0.04
Residual	31980.055	264	121.137		
Total	31989.338	265			

$\alpha = 0.05$

In order to test hypothesis 6, correlation analysis was used. The result in Table 12 shows that an F-ratio of 0.08 with associated exact probability value of 0.04 was obtained. This probability value of 0.04 was compared with 0.05 set as level of significance for testing the hypothesis and it was found to be significant because 0.04 is less than 0.05. The null hypothesis which stated that; there is no significant relationship between the opinion of Teacher and Students' classroom management on students' academic achievement in basic electricity was rejected and inference drawn was that Teacher and Student classroom management is significantly influence students' academic achievement in basic electricity. In other words, there is a significant relationship between Teacher and Students' classroom management on students' academic achievement.

DISCUSSION

The Relationship between Teacher and Students' relationship of classroom psychosocial environment on Students' academic achievement in basic electricity.

The responses of Teacher were correlated with student's relationship of classroom psychosocial environment on student academic achievement in basic electricity. The result shows that the correlation coefficient obtained was 0.73. This means that, there exist a high positive relationship between teacher and students' relationship on students' academic achievement in basic electricity. The result shows that the coefficient of determination (R^2) associated with the correlation coefficient of 0.73 was 0.01. This coefficient of determination (R^2) indicates that, 1% of teacher and students' relationship of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 99% of the variation on students' academic achievement in basic electricity is attributed to other factors other than teacher students' relationship. These findings are in line with Hawk (2001) who observed that teaching characteristics that facilitates teacher-student relationship for enhanced learning include: empathy, care, respect, going an extra mile, passion to motivate, patience and perseverance as well as belief in student's abilities. Similarly, the findings also agreed with Aminu (2006) who stated that teachers and students relationship should be warm and friendly so as to bring about effective transfer of learning among them and consequently improve students' academic performance.

The Relationship between TC11 Students' and TC111 Students' relationship on student academic achievement in basic electricity.

The responses between TC11 students were correlated with TC111 students of classroom psychosocial environment on students' academic achievement in basic electricity. The result shows that the correlation coefficient obtained was 0.79. This means that, there exists a direct positive relationship between TC11 student and TC111 students' on students' academic achievement in basic electricity. It was shown that the coefficient of determination (R^2) associated with the correlation coefficient of 0.79 was 0.06. This coefficient of determination (R^2) indicates that, 6% students-students' relationship of classroom psychosocial environment accounted for the increase on students' academic achievement in basic electricity. This is an indication that 94% of the variation in students' academic achievement in basic electricity is attributed to other factors other than students- students' relationship. These findings are in agreement with Johnson and Johnson (2014) who identified three basic ways students interact with each other: they can compete with each other, work individually or work together cooperatively taking responsibility for each other's learning as well

as their own. The findings are also in line with Giles (2008) who found out that students learn more material when they work together cooperatively, talking through the material with each other and making sure that all group members understand than when they compete with each other or work individually.

The Relationship between Teacher and Students' involvement on student academic achievement

The responses of teachers of classroom psychosocial environment were correlated with students' involvement in basic electricity on students' academic achievement. The result shows that the correlation coefficient obtained was -0.57. This means that, there exist a direct negative relationship between teacher students' involvement and students' academic achievement. The result also shows that, the coefficient of determination (R^2) associated with the correlation coefficient of -0.57 was 0.87. This coefficient of determination (R^2) indicates that, 87% of teachers in classroom psychosocial environment accounted for decrease in students' academic achievement in basic electricity. This is an indication that 13% of the variation in students' academic achievement in basic electricity is attributed to other factors other than teacher students' relationship. These findings are in line with Coates (2006) who argued that students and teacher interaction is an important indicator of students' academic involvement at technical level. The findings also agree with Churchill (2011) who stated that positive teachers – students' involvement in teaching and learning makes learning enjoyable experiences, creating balanced teaching and learning atmosphere

The Relationship between Teacher task orientation and Students' involvement on student academic achievement

The responses of Teacher task orientation of classroom psychosocial environment were correlated with Students in basic electricity on students' academic achievement. The result shows that the correlation coefficient obtained was -0.21 This means that, there exist a direct positive relationship Teacher Task orientation and student in Basic Electricity on students' academic achievement. The result also shows that, the coefficient of determination (R^2) associated with the correlation coefficient of -0.21 was 0.45 This coefficient of determination (R^2) indicates that, 45% of Teacher task orientation of classroom psychosocial environment accounted for students' in basic electricity on academic achievement. This is an indication that 55% of the variation in students' academic achievement in basic electricity is attributed to other factors other than Teacher task orientation. These findings are in agreement with Thomas and Dynneson (2009) who stated that task orientation involves goals and activities designed to enhance students' comprehension of identified concepts, skills or values;

and should capture the attention of students, keep students attention as well as heighten their interest in the task.

The Relationship between Students' and Students' competition on student academic achievement

The responses of classroom competition of TC11student's were correlated with TC11students' on academic achievement in basic electricity. The result shows that the correlation coefficient obtained was -0.08. This means that, there exists a direct negative relationship between competition of TC11students' and TC11students' on students' academic achievement. The result shows that the coefficient of determination (R^2) associated with the correlation coefficient of -0.08 was 0.23. This coefficient of determination (R^2) indicates that, 23% of TC11students' and TC11students' competition of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 77% of the variation on students' academic achievement in basic electricity is attributed to other factors other than students' students' competition. These findings are in line with Abernathy and Vineyard (2011) who reported that students competition tap into natural curiosity of students and provide an arena for them to learn new things. Similarly, the findings are in line with Ozturk and Debelak (2008) who stated that students' competition may provide the motivation required to get students started to discover the joy of learning.

The Relationship between Teacher and Students' classroom management on student academic achievement

The responses of the teacher classroom management were correlated with students' in basic electricity on students' academic achievement. This means that, there exist a direct negative relationship between Teacher classroom management and students 'on academic achievement. The coefficient of determination (R^2) associated with the correlation coefficient of 0.02 was 0.00. This coefficient of determination (R^2) indicates that, 100% of Teacher classroom management of classroom psychosocial environment accounted for students' academic achievement in basic electricity. This is an indication that 100% of the variation in students' academic achievement in basic electricity is attributed to other factors other than classroom management.

Limitation of the study

Findings of this study cannot be generalized for the entire state that constituent the entire population of the state. Since, the study focused on government technical colleges in Niger State. Findings of this study cannot be generalized for the entire electrical/electronic student since, the study was only limited to basic electricity.

Recommendations

Based on the findings of the study, the following recommendations were made:

- a. Workshops, seminars, conferences, and short time courses should be organized by College Administrators for Basic Electricity Teachers to equip them on modern strategies to maintain and sustain teacher – students' relationship, as well as measures of conducive classroom management.
- b. More task orienting exercises should equally be organized for Basic Electricity students to keep them more socially related as well as up competing. This could be achieved organizing quizzes, group work, individual and group presentations.

CONCLUSION

Based on the results of the study, the following conclusions were made: there exist a high positive relationship between teacher and students' relationship on students' academic achievement in basic electricity; there exists a high positive relationship between TC11student and TC111students' on students' academic achievement in basic electricity; there exists a direct negative relationship between teacher students' involvement on students' academic achievement in basic electricity; there exist a high positive relationship Teacher Task orientation and student in Basic Electricity on students' academic achievement; there exist a direct negative relationship between competition of TC11students' and TC111students' on students' academic achievement in basic electricity; there exist a direct negative relationship between Teacher classroom management and students 'on academic achievement; there is significant relationship between the opinion of teacher and students' relation on students' academic achievement; there is a no significant relationship between the opinion of TC11 students 'and TC111students' relation on students' academic achievement; there is significant relationship between teacher and students' involvement on students' academic achievement; there is a significant relationship between the opinion of teachers and students' basic electricity task orientation on students' academic achievement; there is a no significant relationship between the opinion of TC11 students' and TC111 students' competition on students' academic achievement; and there is a significant relationship between Teacher and Students' classroom management on students' academic achievement.

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