

The Correlation Between Automobile Technical College Students' Empathic Behavior and Academic Achievement in Nigeria Technical Colleges

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Abstract— This study was carried out to ascertain the correlation between Automobile students' empathic behavior and academic achievement. The design of the study is correlation design. The area of study is the technical colleges in Edo State, Nigeria.. The population of the study comprises of 84 Automobile Technology students (male and female) from all the technical colleges in the state. No sampling for the study because of the manageable population. Two instruments used for empathy assessment are; Interpersonal Reactivity Index (IRI) produced by Davis in 1980 and empathy assessment instrument by Eisenberg and Lennon (1983). Another instrument used was academic test report of the NTC 2 technical college students. The reliability of the instrument was done using a test-retest method. The test scores were compared using Cronbach Alpha and a reliability coefficient 0.68 was realized. The data was analyzed using pearson moment correlation coefficient. The main findings of the study are that there is significant relationship between Automobile students' empathic behavior and their achievement. Gender wise, it ascertains that there is no significant relationship between male empathy scores and female empathy scores. It was recommended that there is an urgent need to equip learners with useful knowledge and technical skills, especially those that enhance empathic behavior of Automobile students in order to promote interpersonal relationship among students. Also, collaborative instructional approach should regularly be used in the teaching and learning automobile technology courses in technical colleges in Edo state, Nigeria.

Index Terms: Automobile Technology, Teaching, Learning, Empathic Behaviour.

I. INTRODUCTION

Education is generally accepted as a tool of critical importance for national development. It will only achieve that by equipping spirit of patriotism. One of such skills that is of interest to educators and the society at large is the quality of empathy that an individual has Jonnes (1990). The implication of Jones statement is that without empathy, the prosocial or altruistic behavior that is needed for individual and national growth would be lacking. That is to say that the ability to empathize would help an educated person to use education to meet the needs of another people be it psychological needs or academic needs, Caselman (2007) seems to agree with the above statement when he describes empathy as the ability to understand another's feelings and to express that understanding in a caring way. Eisenberg and Fables in Wikipedia (2015) view empathy as an important motivator of action that benefit another person without any expected reward for the self. That goes to say that a student can help another student with his/her academic difficulties without any attachment or reward. Furthermore, Caselman (2007) sees empathy as an important life skill which improves engagement and motivation in children.

Empathy according to Berk (2006) involves a complex interaction of cognition and effect, which he explains as the

ability to detect different emotions, take another person's emotional perspectives and feel with the person, or respond emotionally in a similar way. The above description entails that the act of empathizing is not just a physical thing, rather it is mentally induced. In order words, it is not entirely learned from the environment. Berk (2006) observes that empathy has its root early in development hence one can see a baby crying in response to the crying of another baby. He equally observes that babies connect emotionally with their care givers and this experience is believed to be the foundation for empathy and care for others. A study by Decety, Michalska, and Akitsuki (2008) at the University of Chicago attest to the above statement. They used Magnetic Resonance Imaging (MRI) scans to evaluate children's empathetic responses, and found that empathy is an innate trait or tendency that developed in the brain of normal children. They also claimed the brain played more of a role in empathy than the influence of parents. Like every other innate trait or tendency, environmental factors help in sharpening it. In other words, being nurtured in an aggressive or violent environment could harden an individual thereby making him/her not to be empathetic. Cotton (2001) seems to agree with the above when he said that empathy is innate and that children continue to develop their empathetic skills by observing the environment around them.

Furthermore, Agulanna and Nwachukwu (2001) describe empathy as the ability to recognize and understand another's motives and emotions as if you were in the other person's shoes. This is the cornerstone of successful interpersonal interaction. An empathetic person is sensitive to the needs and feelings of others. It requires an ability to read and interpret nonverbal behavior such as facial expression, tones of voice and gestures. In the same vein, Goleman in Safosky (2009) says that empathy is a base for moral judgment and action. Many people's altruistic actions when helping a distressed person are strongly tied to their empathic feelings and that has to do with the realization that it is ethically right to help one who is in need. Empathy is one aspect of social and emotional learning that involves understanding and sensitivity to feelings, thoughts and experiences of another person. Often times these feelings are communicated non-verbally or through body language. According to Cotton (2001) and Society for Research in Child Development (2015), that in the research; there is impressive correlation between students training and skill in empathic understanding and their academic performance.

Most students do not pay attention in class or even express an understanding of the key concepts orally or in writing. They do not know that they should play a major role in the learning process or even care about how others learn. As a result of this, they do not perform well in class work and assignment. Nwachukwu and Agulanna, (2003) say that learning can only take place if the learners pay attention to what is happening around them. Such children are most of the time left at the mercy of their fellow students to learn what was missed in the classroom. Then imagine a situation where those students who were able to grasp information when it was taught refuse to help those who could not grasp the information; the resultant effect will be failure or poor academic performance of the later.

Furthermore, many students portray lack of empathy so much in dealing with issues and academic works. Antisocial behaviors are rampant among students in Technical colleges in Edo State and this is detriment to academic activities of students in Technical Colleges. Anti-social behaviors are generally frowned at, because of their damaging effects such as misunderstanding, and poor academic performance. Supporting the above statement, Kagan; Johnson and Johnson cited in Cotton (2001) affirm that mutual understanding, mutual attraction and empathy are linked. Disappointedly, several classroom strategies and program design which tend to foster increases in empathy and pro-social behavior such as teamwork or cooperative learning, modelling, cognitive apprenticeship are not well utilized. Cotton (2001) opines that helping children develop socially and emotionally can develop children's academic ability. That implies that teachers and educators should use instructional approaches that will enhance students' empathy in our schools and technical colleges.

In addition, teachers should exhibit empathic behaviours

for students to emulate. They should equally discourage some social vices like bullying, fighting, aggression etc. students who are not empathic exhibit all sorts of antisocial behaviours at school, such as truancy, absenteeism, violence of every kind, bullying, cultism, lack of dedication to study etc. they constitute nuisance to other students. Most times, their activities hamper other students' performance. Akins and Sleit (2001) said that there is too little caring in the world today. People do not care for others; hence, they do whatever they like. The same is true of the school child. They added that one aspect of caring is empathy. Terrie cited Start Empathy (2013) states that emotional readiness is a key to school success. That underscores the fact that empathy is important in a child's education. It is believed that taking time to help children develop socially and emotionally can improve their academic outcomes.

Gender wise, Galligan in Stemberg and Williams (2002) observed that men and women have different conception of morality. According to Galligan, men tend to focus on abstract, rational principles such as justice and respect for the rights of other while women tend to view morality more in terms of caring and compassion. Women empathy stem from the fact that they are sensitive to the obligations of close relationships. Baumrind, Gibbs, Arnold, Ahlborn, and Chessman in Stemberg and Williams (2002) equally observed that female are more empathic than male. The above may explain why male seem to be more aggressive and violent than female.

II. STATEMENT OF THE PROBLEM

The prevalent poor academic performance of students in Technical colleges been attributed to a number of factors, among which is the lack of empathy among school students. Most students do not like to cooperate with other students at school and this has serious academic implications. Despite all the effort exerted to make students engage in cooperative learning approach, many are yet to come to terms with it. Most often, intelligent students keep away from low intelligent ones. Students hoard books and other academic materials from fellow students. The above situation depicts lack of empathy for other people's predicament.

Studies have shown that school children, who exhibit high level of empathy, also perform well academically. In other words, empathy correlates with academic performance (Cotton, 2001). Based on the above finding, the researchers had the hunch that enhancing empathic behavior of students in Technical colleges could improve their academic achievement.

It is against this backdrop that the researchers set of to investigate the correlation between Automobile students' empathic behavior and their academic performance in technical colleges.

III. RESAERCH HYPOTHESIS

The following hypotheses were formulated to guide the study;

1. There is no significant relationship between empathic behavior of automobile students and their academic achievement in technical colleges in Edo state, Nigeria.
2. There is no significant relationship between empathy scores of automobile courses of female and male counterparts in technical colleges in Edo state, Nigeria.

IV. METHOD

The design of this study is correlation design. The design was chosen because the work involved ascertaining the extent of relationship between two variables/empathy and academic outcomes. The area of study was technical colleges in Edo State. The population of this study was made up of all the eight-four (84) automobile students in NTC (SSI1) in Edo State. There no sample for the study.

Technical colleges	Male	Female	Population
FSTC UROMI	20	2	22
GSTC BENIN	16	4	20
GSTC IRRUA	20	3	23
GSTC IGARRA	14	1	15
GSTC AFUZE	3	1	4
Total	73	11	84

MOE: (2023)

Two instruments were used for empathy assessment and they are: Interpersonal Reactivity Index (IRI) Davis, (1980) and empathy

assessment instrument by Eisenberg and Lennon (1983). Interpersonal Reactivity Index (IRI) Davis (1980) has four scales, each measuring a distinct component of empathy. These four scales are:

1. Empathic Concern (feeling emotional concern for other)
2. Perspectives (cognitively taking the perspective of another).
3. Fantasy, emotional identification with characters in book, films etc,
4. Personal distress (negative feeling in response to the distress of others).

The Interpersonal Reactivity Index (IRI) produced by Davis in 1980 is a standardized instrument. It has been in use for over twenty years since its development (Frías-Navarro, 2009). They were used to assess level of empathy of the National Technical College (NTC) two (SS 11) college students.

Another instrument used was the first term (2014/2015 session) academic test report for all the subjects from the Senior Secondary Schools. The essence was to correlate the empathy score and that of the academic achievement to see if any relationship exists.

To ascertain the reliability of the instrument, a test-retest method was used. The test was administered to 100 students from another four schools in Esan West Local Government Area. after a period of two weeks; the same test was re-administered to the same group. The first and second tests were compared using Cronbach Alpha computation and a reliability coefficient of 0.68 was realized.

The data collected from the field were analyzed using the Pearson product moment correlation coefficient, simply referred to as the Pearson r at 0.05 level of significance.

V. RESULTS

Table I: Result of Correlation Analysis between Automobile Students' Empathy and Academic Scores of Students in Technical colleges in Edo State.

Variable	N	X	SD	LS	Corr.	Signi	Remark	Decision
ES	84	5.83	1.78	0.05	0.79	0.00	Sign	Rejected
AAS	84	4.77	2.19					

The result of the analysis in the two sets of data presented in table I shows that the computed r (0.79) is greater than the critical r value (0.5760) for two-tailed test at 0.05 level of significance. There is every reason to reject the null

hypothesis, therefore there is significant relationship between empathy and academic achievement scores of automobile technology students in Technical colleges in Edo State, Nigeria.

Table II: Correlation analysis between Automobile technology male empathy and female empathy scores

Variable	N	X	SD	LS	Corr.	Signi	Remark	Decision
ME	84	4.08	0.92	0.05	0.104	0.30	Not sig	Accepted
FE	84	7.58	0.42					

The result of the analysis as presented in table 2 shows that for male and female empathy scores, the computed r (0.104) is less than the critical r value (0.5760) for two-tailed test at 0.05 level of significance. There is every reason to accept the null hypothesis, and conclude that there is no significant relationship between the male and female automobile technology student's empathic scores in technical colleges in Edo Nigeria.

VI. DISCUSSION OF FINDINGS

Result from hypothesis one, shows that there is significant relationship between empathy and academic scores of students. The results corroborate with a study carried out by Feshbach and Feshbach reported in Society for Research in Child Development (2015) on achievement, empathy, depressive affectivity, aggression, and self-concept measures were obtained for 8-9- and 10-11-year-olds. Depressive affectivity and aggression were assessed by teacher ratings and self-reports. Empathy was assessed by audiovisual tapes. Measures were re-administered to the younger group 2 years later. Results show strong relations in girls age 10-12 and 12-14 empathy and achievement in reading and spelling. Also, the results with the findings of Bonner and Aspy reported in Cotton (2001) that there is significant correlation between student scores on measures of empathic understanding and their grade point averages. Three other studies by Cotton (2001) identified correlations between empathy and other traits such as students' training and skills in empathetic understanding and their academic performance in automobile technology in technical colleges.

The findings from hypothesis two show that there is no significant relationship between automobile technology male empathy scores and female empathy scores. This is an indication that male and female automobile technology students' empathy is almost the same as far as this study is concerned. The above findings could be as a result of the teachers' disposition in the classroom and the instructional approaches used in the targeted schools. Also, it is common knowledge that Edo people are known for their good hospitality and friendliness. The findings of this study seems to agree with what Cotton (2001) wrote about empathy. According to him, empathy is innate and children continue to develop their empathic skills by observing the environment around them. Those subjects might have improved on their empathic skills through interaction with significant people around them and from the empathic skills they were exposed to.

On the other hand, the study disagrees with the opinion of Galligan as cited in Sternberg and Williams (2012) that women show empathy in that they are sensitive to the obligations of close relationships than men who are competitive orientated. The truth remains that there is bound to be inconsistency in the findings of most studies on gender and empathy and this is understandable given the influence of heritability and environment on human behaviours.

Furthermore, a careful look at the results and findings of this study automatically brings to focus its implications to teaching and learning. It is expected that the findings would spur learners into being empathic towards one another having known that it correlates positively with academic achievement. This would also enhance their interpersonal relationship.

Teachers would equally endeavour to promote empathy among automobile technology students having discovered that it would help them achieve the objective of teaching and learning automobile courses in technical colleges. Equally, it will make the work of automobile teachers much easier. The school system will experience improvement in the academic performance of learners and the nation will have patriotic citizens that will work for the good of one another and the nation in general.

VII. SUMMARY

This paper sought to ascertain the relationship between automobile technology students' empathy and their academic achievement in technical colleges. The main finding of the study is that empathy correlates with academic performance of students in technical colleges in Edo state. The implication of the above is that parents, teachers and educators should encourage the development of empathy among students as a way of enhancing academic achievement of students in technical colleges in Edo State, Nigeria.

VIII. RECOMMENDATIONS

Discussed below are some recommendations derived from the study:

1. Based on the findings of this study, there is therefore an urgent need to equip learners with useful knowledge and skills, especially those that enhance empathic behavior of students.
2. In order to promote interpersonal relationship among adolescents, collaborative instructional approaches should regularly use in the classroom.
3. Since studies have shown that empathy is innate, teachers should try and identify those adolescents with high level of empathy and use them as models and peer mentors.
4. Corrective measures should be used to discourage those adolescent who have antisocial behaviours from exhibiting such acts.

Extracurricular or recreational activities interpersonal relationship should be provided in schools etc.

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