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## **Emotional Intelligence and Academic Adjustment of** Second-Year University Students in Akwa Ibom State, Nigeria

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#### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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### **ABSTRACT**

The importance of emotional intelligence on academic outcomes cannot be overstated. Several studies have been conducted in the past to shed light on the associations that exist between EI and these outcomes. Making use of Goleman's Emotional Intelligence model, the researchers investigated the relationship between the personal skills of EI and academic adjustment of secondyear University students in Akwa Ibom State. The correlational design was adopted for the study. The population of the study consisted of all the second year university students from two universities in Akwa Ibom state. A sample of 500 students was selected for the study using the Taro Yamane Sampling formula. The subjects were drawn using simple random sampling technique. The instruments for data collection were adopted standardized "National Health Service Emotional Intelligence Questionnaire" (NHSEIQ) and "Academic Adjustment Scale" (AAS). The instruments were used to obtain information with regards to both the dependent and independent variables. Three research questions and hypotheses were formulated and tested at .05 significance level using the Pearson Product Moment Correlation analysis. The results indicated that there is a positive and

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significant relationship between emotional intelligence and academic adjustment. Based on the results of the data analysis, a conclusion was drawn that emotional intelligence is a prerequisite for academic adjustment of second-year university students.

Keywords: Emotional intelligence; Self- awareness; Self- regulation; Self-motivation; Academic adjustment.

## 1. INTRODUCTION

Academic achievement and success of students have always been and will continue to be of great concern to parents, teachers. administrators and significant others. This is not surprising since academic achievement is believed to lead to future vocational and professional success Denga [1] asserted that individuals live in an era where educational achievement is a necessity for vocational achievement, social recognition and personal improvement and fulfillment. This belief has led to the increasing demand for higher education around the world.

According to Parker et al. [2] adjustment is the behavioural process that individuals acquire for balance to enable them solve life long problems. Santrock [3] maintained that adjustment refers to a continuous process by which a person changes his own behaviour or tries to change his environment, in the face of his need for adaptation. Sharma [4], defined adjustment as "the reaction to the demands and pressures of the social environment imposed upon the individual ". It is a process of altering one's behaviour to achieve a harmonious relationship with one's environment. For the fact that life is filled with eventualities, the ability to change one's behaviour appropriately is essential for Students' developmental adjustment. academic challenges are among the issues that require modification. It is not surprising that even students with high Intelligence Quotient still end up failing courses or dropping out of school. Vargas et al. [5] asserted that maladjustment has dire social and emotional implications and may force a student to leave the school as a result of to cope with academic struggles extracurricular tasks. Coe et al. [6] also implied that poor academic adjustment correlates with poor academic performance, high dropout rate and lack of success later in life.

Academic adjustment is a critical factor that guarantees the attainment of academic goals. Academic adjustment refers to an individual's ability to meet academic demands, to be attentive, to participate in class activities and

become a learner capable of independent learning. Researches show that students' inability to adjust to the school psychosocial environment is one of the major causes of withdrawal from school, as well as academic frustration [7] [8]. Wang et al. [9] affirmed that academic adjustment entails dealing with various scholarly demands, while sustaining the drive to engage in other goal-oriented tasks. The transition from high school to tertiary institution is a major life change for many young people. This comes progression usually with responsibilities and challenges. When students graduate from secondary schools into the universities, the students usually face unfamiliar experiences as well as a more demanding social and academic environment. Students get anxious as they adjust to academic, social, personal and lifestyle challenges that the university presents.

Emotional intelligence has been suggested as one of the factors which could influence students' academic orientation. According to Goleman [10] emotional intelligence has been suggested as a critical factor in successful adjustment to life in general, and to occupational endeavours. Goleman stated that emotional intelligence consists of five components; knowing one's own emotions (self-awareness), managing them (selfregulation), motivating oneself (self-motivation), recognizing emotions in others (empathy), and handling relationships (Social skills). Emotional intelligence has further been explained as a concept that captures a broad collection of interpersonal and intrapersonal skills [11]. Interpersonal skills consist of the ability to understand the feelings of others, empathize, maintain and develop inter-personal relationships, and above all, acquire a sense of responsibility. On the other hand, intra-personal skills comprises of the ability to understand one's own feelings [12]. These skills are further interpreted as personal competences and social skills. The personal competences include selfawareness, self-regulation and self-motivation while the social competences include empathy and social skills. The researchers intend to focus on the personal aspects of emotional

intelligence, vis a vis self-awareness, self-regulation and self-motivation because of the relative paucity of findings linking these personal competencies with academic adjustment.

Self-awareness entails anticipating how others perceive one, as well as evaluating oneself and one's actions according to collective beliefs and values [13]. As humans, we have the ability to alter our behaviours, perceptions, attitudes and beliefs to became better individuals. For this alteration to occur, a certain level of selfawareness must be present. Self-regulation, according to Zimmerman [14], is the regulation of thoughts, emotions and self-generated actions, which are planned and acquired periodically to achieve personal goals. Self-regulation is a skill that individuals employ to change their thoughts. feelings, desires, and daily activities to attain higher goals. Motivation has been defined as a need or desire that serves to energize behaviour and/or direct it towards a goal [15] Selfmotivation can be seen as the intrinsic or innate motivation which, according to Enang [15], is the desire of students to learn without need for external inducements.

Several empirical studies have been carried out on components of emotional intelligence, and variables such as academic achievement amongst others. David and Ukpong [16] carried out a study on the influence of self and social awareness on business education students' academic performance in federal universities in South-South, Nigeira. The study employed a sample of 356 respondents. Data was collected using the Emotional Competency Inventory and analysed using multiple regression analysis. The result revealed that there was a significant influence of self-awareness and awareness on Business Education students' academic performance in federal Universities in South-South, Nigeria. Also, Haider et al. [17] carried out a study on students' motivation and its relationship with their academic performance. The study was carried out using respondents. Data collection was done with the use of a structured questionnaire and analysed using regression and correlation techniques. The study revealed that intrinsic and extrinsic motivation had a positive impact on students' academic performance.

Pola [18] in a study on the relationship between self-regulation, motivation and performance of secondary school students, using 270 secondary school students, found that self-regulation has a strong impact on the level of attainment achieved by students, enhancing the relationship between motivation and performance.

Yahaya, et al. [19] carried out a study on the impact of emotional intelligence elements on academic achievement using 370 respondents. The questionnaire was used in collecting data for the study while Pearson Product Moment Correlation and multiple regression analysis were used in analyzing the data. The study revealed a significant relationship between the emotional intelligence elements and academic achievement which implied that the level of emotional intelligence contributes to and enhances the cognitive abilities in students.

Tanner [20] also carried out a study on the relationship between attachment self-regulation. and resilience in undergraduate students' college adjustment using 68 respondents. The Connor Davidson-Resilience Scale, Parental Attachment Questionnaire. Short Self-regulation Questionnaire and Student Adaptation to College Questionnaire where the instruments used for data collection, while multiple regression analysis and Pearson Product Moment Correlation were used for data analysis. The study revealed significant positive relationship between selfregulation, resilience and each of the college adaptation components.

Adeyemo [21] also carried out a study, titled, "the buffering effect of emotional intelligence on adjustment of secondary school students in transition in Ibadan Nigeria". The purpose of the study was to investigate the relationship between emotional intelligence and school adjustment of students transiting from primary to secondary school. The study was a descriptive survey research in which emotional intelligence was the independent variable and school adjustment was the dependent variable. The sample for the study consisted of 200 "fresh" secondary school students randomly selected, from within the age range of 9 to 14 years. The participants were grouped into high, moderate and low emotional intelligence categories based on their scores in the Emotional Intelligence Questionnaire. A 33 items emotional intelligence questionnaire designed by Shuttle et al [22] was used to assess the emotional intelligence of the subjects. A high score on the scale indicated a high emotional intelligence. The second instrument used to asses the adjustment of the subjects was Adolescent Personal Data Inventory developed by Akinboye [23]. It was a 20 item scale with a response format that ranged

from strongly agree to strongly disagree. The data collected were analysed using Pearson Product Moment Correlation and ANOVA. The results of the study showed that there was a significant relationship between emotional intelligence and school adjustment of the students. It was also found that the strength of emotional intelligence, defined in terms of high, moderate and low significantly impacted on the adjustment of the students in transition.

It is against this background and the findings that most educational challenges including poor grades, dropout etc. result from poor academic adjustment that the researchers set out to investigate how personal competence components of emotional intelligence relates to academic adjustment of students.

### 2. STATEMENT OF THE PROBLEM

The goal of sending students to school is for them to achieve success and become useful members of the society. Proper academic adjustment has been reported as a crucial factor for achievement of academic success. However, students in higher institutions are said to be confronted with some adjustment challenges in the school setting which could result to their being poorly adjusted, and thereby affect their academic success adversely. Poor students' academic adjustment has been associated with antisocial behavioural consequences such as bullying, violence, cultism, rape, poor students' relationship and poor academic performance. In the recent years, there has been growing concern on the increasing level of these antisocial behaviours among Nigerian students, which point to poor students' adjustment in the school.

As a result of these problems related to poor students' adjustment in the school, it is therefore pertinent to explore some factors which could be useful in improving students' academic adjustment and enhancing their school success. Meanwhile, there have been some research findings about the importance of emotional intelligence as a factor in improving academic adjustment of students. The researcher is therefore, motivated to conduct this study in order to examine the extent of relationship that exists between the personal components of emotional intelligence and academic adjustment of university students.

### 2.1 Research Questions

- To what extent does self-awareness relate to academic adjustment of second-year university students in Akwa Ibom State, Nigeria?
- To what extent does self-regulation relate to academic adjustment of second-year university students in Akwa Ibom State, Nigeria?
- To what extent does self-motivation relate to academic adjustment of second-year university students in Akwa Ibom State, Nigeria?

## 2.2 Hypotheses

- There is no significant relationship between self-awareness and academic adjustment of second-year university students in Akwa Ibom State, Nigeria.
- There is no significant relationship between self-regulation and academic adjustment of second-year university students in Akwa Ibom State, Nigeria.
- 3. There is no significant relationship between self-motivation and academic adjustment of second-year university students in Akwa Ibom State, Nigeria.

### 2.3 Research Design

This study adopted a correlational research design. As noted by Kpolovie [24] in Amajuoyi and Joseph [25] correlational design is adopted for studies that investigate the magnitude and direction (positive or negative) of relationship that exist between a dependent variable and one or more independent variable(s).

## 2.4 Area of the Study

The area of the study is Akwa Ibom State. Akwa Ibom State is one of the 36 states in Nigeria. It was created on 23<sup>rd</sup> September, 1987, under Decree No. 24 promulgated by the Federal Government of Nigeria. The State is divided into three Senatorial Districts namely, North-East, North-West and North-South with 31 Local Government Areas.

In terms of Education, Akwa Ibom State is regarded among the educationally advantaged states of the country. Some of the educational institutions in the State are: University of uyo, Uyo, Maritime Academy, Oron, Akwa Ibom State

University, Ikot Akpaden, Akwa Ibom State Polytechnic, Ikot Osurua, Uyo City Polytechnic, Apex polytechnic, Ukanafun, Heritage Polytechnic, Eket, Schools of Nursing (Uyo, Eket, Oron, Ikot Ekpene, Etinan), Akwa Ibom State College of Education, Afaha Nsit, College of Arts and Sciences, Nung Ukim, Ritman University, Ikot Ekpene, Sure Polytechnic, Ikot Inyang, Murid Polytechnic, Nsit Ibom and Cannan Polytechnic, Mkpat Enin.

## 2.5 Population of the Study

The population of the study was 14,715. This consisted of 12,680 second year students from the university of Uyo, Uyo and 2,035 second year students from Akwa Ibom State University, Ikot Akpaden. These data were obtained from the portals of the two institutions for the 2017/2018 academic session.

## 2.6 Sample and Sampling Technique

A sample of 500 respondents from the two institutions (university of) Uyo and Akwa Ibom state University) was used for the study. The sample size was calculated using the Yamane sampling formula and estimated to 500 students. The simple random sampling technique was used in selecting 250 students from each of the two institutions. The hat and draw method was employed by the researchers.

## 2.7 Research Instrument

The researchers adopted two instruments for the study. The first instrument "National Health Service Emotional Intelligence Questionnaire" (NHSEIQ) developed by National Health Service [26], had two parts, I and II. Part I solicited demographic information from the respondents. Part II consisted of three sections as follows: self-awareness. self-regulation and motivation. The second instrument tagged "Academic Adjustment scale" (AAS) designed by Anderson, Guan and Koc [27] and consists of nine items. The instruments were measured on a four-point Likert scale scored; Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1).

In order to establish the reliability estimates for the instruments, the instruments were administered to 40 respondents (20 from each of the two institutions), who were not included in the main study. The reliability coefficient of the instrument was tested using Cronbach alpha technique which yielded a coefficient of .72. Pearson Product Moment Correlation analysis was used to answer the research questions while and test the hypotheses at .05 level of significance.

#### 2.8 Decision Rule

To answer the research questions, the following rules guided the researchers' decisions as suggested by Evans [28].

Very High relationship	0.88-1.00
High relationship	0.63-0.87
Average relationship	0.50-0.62
Low relationship	0.38-0.49
Very low relationship	0.13-0.37

In testing the hypotheses, the null hypotheses were rejected when the P value .000 is less than the critical value at .05 level of significance.

### 3. RESULTS

As shown on Table 1, the calculated r-value is .965. This represents positive and a very high relationship. Therefore, the researchers inferred that self-awareness has high positive relationship with academic adjustment. The Pearson Product Moment Correlation (r) according to Table 1 was found significant at .000 which is less than our level of significant of .05; hence the null hypothesis is rejected. Therefore there is a significant relationship between self awareness and academic adjustment .

As shown on Table 2, the calculated r-value is 0.853. This represents a positive and very high relationship. Based on the decision rule the researchers found that self-regulation has high and positive relationship with academic adjustment. Also, the Pearson Product Moment Correlation (r) according to Table 2 was found significant at .000 which is less than the level of significant of .05; hence the null hypothesis is rejected. Therefore there is a significant relationship between self regulation and academic adjustment.

Table 3 revealed a calculated r-value of .727. According to the adopted decision rule this represents a positive and very high relationship. As a result, the researchers concluded that self-motivation has high and positive relationship with academic adjustment. Furthermore, the Pearson

Table 1. Pearson Product Moment Correlation (r) values for the relationship between selfawareness and academic adjustment

Variables	N r- value Sig (2Tailed)	r-alue Remark mmmm,,n b ) Remark
Self-awareness Academic	500 .965 .000	High
adjustment		Relationship

Table 2. Pearson Product Moment Correlation (r) values for the relationship between selfregulation and academic adjustment

Variables	N r- value Sig (2Tailed)	r-alue Remark mmmm,,n b ) Remark
Self-regulation	500 .853 .000	High
Academic adjustment		Relationship

Table 3. Pearson Product Moment Correlation(r) values for the relationship between selfmotivation and academic adjustment

Variables	N r- value Sig (2Tailed)	r-alue Remark mmmm,,n b ) Remark
Self-motivation	500 .727 .000	High
Academic adjustment		Relationship

Product Moment Correlation (r) according to Table 3 was found significant at .000 which is less than the level of significant of .05. Based on that the null hypothesis is rejected. Therefore there is a significant relationship between self-motivation and academic adjustment.

#### 4. DISCUSSION OF FINDINGS

## 4.1 Relationship between Self-awareness and Academic Adjustment

The study revealed a very high and significant relationship between self - awareness and academic adjustment of students from data analysis in research question one and hypothesis one. The null hypothesis was rejected. The result is in agreement with the findings of David and Ukpong (2016) that self-awareness influences students academic performance and therefore that a balanced combination of emotional and cognitive strategies be employed in training students. Self-awareness as a skill entails being aware of and understanding one's emotions as the occur and as they evolve enables students know and understand their emotions as well as direct same to the attainment of academic goals. To further throw light on this, Howard et al. [29] drew linkages between self-determination ideals positive academic and emotional outcomes. Academic adjustment have been found to be a predictor of adjustment in school, learners that exhibit self-efficacy and are aware of their strengths and limitations often find adaptation easier than their contemporaries.

## 4.2 Relationship between Self-regulation and Academic Adjustment

Data analysis of research question two and hypothesis two indicated a very high and positive relationship as well as a significant relationship self-regulation and between academic adjustment; therefore, the null hypothesis was rejected. This result is in line the study with Pola [18] which revealed that self -regulation has a strong impact on the level of achievement attained by students. Also, a study by Tanner [20] revealed a significant positive relationship between self-regulation, resilience and each of the college adaptation components. Students who self-regulate can organize their thoughts. emotions and actions leading to achievement of academic goals. They manage time better; create a healthy balance between curricular and extracurricular activities. They also exhibit intrinsic motivation which enhances academic goal orientation and adjustment.

# 4.3 Relationship between Self-motivation and Academic Adjustment

Results from Table 3 revealed a high positive and significant relationship between self-motivation and academic adjustment. This finding is supported by several studies that associate motivation with positive academic outcomes [16] [18]. Self-motivation plays a very significant role in academic competence. Motivation has been found to be a prerequisite for learning among students at all school levels

[30]. The result is also in agreement with the findings of Haider et al. [17] that found that intrinsic and extrinsic motivation has a positive impact on students' academic performance. Also, a study by Yahaya et al. [19] revealed a significant relationship between the emotional intelligence elements and academic achievement of students. When learners are motivated to learn they imbibe frustration tolerance and show grit in the face of grueling academic experiences. They maintain their focus and strive to improve on their gradea.

## 5. CONCLUSION/ RECOMMENDATIONS

Based on the results of the data analysis a conclusion was reached that emotional intelligence is a prerequisite for academic adjustment second year university students in Akwa Ibom State On the basis of the findings of the study and the conclusion reached, the following recommendations were made:

- Educational programs should be designed to raise the level of emotional intelligence of students in order to promote their academic adjustment.
- 2. Guidance counselors and educational psychologists should include emotional intelligence skills training in their youth development programs for students.
- 3. Students should be encouraged by parents and teachers to read self-development books which will help to boost their emotional and mental strength.
- 4. There is need for a balanced combination of emotional and cognitive strategies to be employed in training students.

#### CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

## ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the authors.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

### REFERENCES

- Denga DI. Educational and Social Psychology. Calabar: CATS publishers; 2002.
- Parker JDA, Amber MJ, Laura LM. Emotional intelligence and students retention, predicating the successful transition from high school to a university. Personality and Individual Differences. 2006;41(7):1329-1336.
- Santrock JW. A Topical Approach to Lifespan Development. New York, NY: McGraw-Hill: 2008.
- Sharma S. Adjustment: Process, achievement, characteristics, measurement and dimensions. International Journal of Academic Research. 2016;3(1):42-45.
- 5. Vargas B, Leiva L, Rojas RA, Scquicciarini AM. Effects of psychosocial adversity on school maladjustment: A follow up of Primary School students. Psychologia Educativa. 2019;25(2):101-108.
- Coe JL, Davies PT, Sturge-Apple M.L. The multivariate roles of family instability and interparental conflict in predicting children's representations of insecurity in the family system and early school adjustment problems. Journal of Abnormal Child Psychology. 2017;45:211-224.
- Edward N. First Impressions last: An innovative approach to induction. Active learning in Higher Education. 2003;4(3): 226-243
- 8. Kumar AP. Peer and family relations: A theoretical model for helping students in distress Unpublished material, University of Malaya, Malaysia; 2006.
- 9. Wang A, Chen L, Zhao B, Yan X. First year students' psychological and behavioural adaptation to college: The role of coping strategies and social support. US-China Education Review. 2006;3(5):51-57.
- Goleman D. Emotional intelligence. New York: Bantam Books; 1995.
- Petrovici A, Dobrescu T. The role of emotional intelligence in building interpersonal communication skills. Proceedia of Behavioral Sciences. 2014; 116 (4):1405-1410.
- 12. Katyal S, Awasthi E. Gender differences in emotional intelligence among adolescents of Chandigarn. Journal of Human Ecology. 2005;17(2):153-155.
- 13. Baumeister RF. The cultural animal: Human Nature, Meaning, and Social Life. New York: Oxford university Press; 2005.

- 14. Zimmerman BJ. Investigating self-regulation and motivation: Historical background, Methodological Developments, and Future prospects. American Educational Research Journal. 2008;45 (1):166-183.
- Enang PI. Educational psychology Learning to Learn and Educaitonal Implications(2<sup>nd</sup> ed.). Uyo: Abaam Publishing Company; 2009.
- David US, Ukpong UO. Influence of Self and Social Awareness on Business Education Students' Academic Performance in Federal Universities in South-South, Nigeria. International Journal of Education, Learning and Development. 2016;4(6):1-8.
- Haider SA, Qureshi MM, Pirzada SS, Shahzade I. A Study of Students' Motivation and its Relationship with their Academic Performance. Journal of Resources Development and Management. 2015;8(11):17-24.
- Pola D. The Relationship Between self-Regualtion, Motivaiton and performance of Secondary School Students. Procedia-Social and Behavioural Sciences. 2015;191:2549-2553.
- Yahaya A, Ee NGS, Bachok JDJ, Yahaya N, Boon Y, Hashim S, Lee GM. The impact of emotional intelligence element on academic achievement. Archives of Sciences. 2012;65(4):2-17.
- Tanner SA. The Relationship between Attachment, Self-Regulation, and Resilience in Undergraduate Students' College Adjustment. Walden Dissertation and Doctoroal Studies Collection; 2018.
- Adeyemo OA. The buffering effect of Emotional intelligence on the adjustment of

- Secondary School Students in Transition Electronic journal of Research in educational Psychology. 2004;3(2): 79-90.
- Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ, et al. Development and validation of a measure of emotional intelligence. Personality and Individual Differences. 1998;25:167-177.
- 23. Akinboye JO. Adolescent personal data inventory APDI, Ibadan: Maritime printers' psychological publications; 1977.
- 24. Kpolovie PJ. Advanced Research Methods. Owerri: Springfield Publishers Ltd; 2010.
- Amajuoyi IJ, Joseph EU. Research Report Writing: A Concise Approach. Aba: Windmill Publishing Company; 2016.
- National Health Service NHS. Emotional Intelligence Questionnaire: Leadership Toolkit. London: London Leadership Academy; 2016.
- Anderson JR, Guan Y, Koc Y. The Academic Adjustment Scale measuring the adjustment of permanent resident or Sojourner Students. International Journal of Intercultural Relations. 2016;54(1):68-76
- Evans JD. Straightforward statistics for the behavioral sciences. Pacific Grove, CA: Brooks/ColePublishing; 1996.
- Howard JL, Bureau JS, Guay F, Chong JXY. Ryan RM. Student motivation and associated outcomes: A meta-analysis from Self-Determination Theory. .Perspectives on Psychological Science. 2020;1(2):1-36.
- 30. Bart O, Hajami D, Bar-Haim Y. Predicting School Adjustment from motor abilities in Kindergarten. Infant and Child Development. 2007;16:567-615.

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