

**IMPACT OF ECONOMIC DEPRESSION AND POVERTY ON UNDERGRADUATE  
CHEMISTRY EDUCATION STUDENTS' ACADEMIC ACHIEVEMENT IN PLATEAU STATE,  
NIGERIA**

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**ABSTRACT**

The study investigated the impact of economic depression and poverty on undergraduate Chemistry Education students' academic achievement in Plateau State. Five research questions guided the study. The study employed the survey design. Three hundred (300) Chemistry Education students from two universities that offer Chemistry Education as a course constituted the sample of the study. A structured 32-item, four-point rating scale questionnaire, title "Impact of Economic Depression and Poverty on Undergraduate Chemistry Education Students' Academic Achievement Questionnaire (IEDPUCESAA)", constructed by the researcher, was used to collect data for the study. Data obtained were analyzed using mean and standard deviation for answering the research questions. The study found that economic depression and poverty affect undergraduate Chemistry Education students' academic achievement in the universities in Plateau State. Based on the findings, it was concluded that Chemistry Education students' achievement is an essential aspect of educational system that cannot be overlooked. It is however, affected by economic depression and poverty. It was recommended, among others, that the key stakeholders in education, namely, private school proprietors, government, cooperate bodies, organizations, companies, associations, missionary bodies, individuals and communities, as well as school administrators, should rise up to this challenge, so that the yearnings of the students who are tomorrow's Chemistry teachers or leaders are effectively met.

***Key words: Achievement Economic depression Impact Poverty***

**INTRODUCTION**

Economic depression and poverty in Nigeria appear to have serious effect on the academic achievement of students, despite government, efforts to eradicate them through national development plans, session papers and campaigns. Students are expected to build up knowledge as continuous and cohesive as much as possible, as learning in bits is not as effective as the wholistic learning which is faster and more effective (Johnson, 2023). Learning can be described as a relatively permanent change in the behaviour of an individual based on his/her experiences or discoveries. (Cherry,2025). The process of experience and discovery lead to a new understanding of the world and ourselves and enable us to apply the acquired knowledge in new situations. Knowledge acquisition, then, involves processes that transform data from experience into organized information. Coulier (2024) made a distinction between three types of knowledge, namely, declarative knowledge, procedural knowledge and metacognitive knowledge. Declarative knowledge refers to factual knowledge. Procedural knowledge refers to skills of doing things and how to execute activities. Metacognitive knowledge is about our awareness of how we think. Furthermore, the knowledge that we have about a particular subject field is called domain knowledge. Domain knowledge includes declarative, procedural and metacognitive knowledge. Teaching can be thought of as consisting of three distinct aspects, namely, planning, interaction and assessment.

Nigeria's economy is almost in complete distress for some years now; there is high poverty level. Economic crises, according to Stephen (2017), have deeply hurt the quality of education in developing countries. The author stressed that it has been particularly devastating to the non-salary category of the recurrent budget resources available for teaching and learning. Layi, Ahmad, Suleman, Alkanchi and Shuni (2024) posited that the economic crisis has had a negative impact on

the educational system and played a major role in the decline of the quality of education offered. Minor (2023) stated that the health of the economy can significantly impact college students thereby reducing educational services and raise students' tuition, fees and as well affect the job market of students and graduates.

Economic depression and poverty from observation, could affect Chemistry Education students' academic achievement and promotion on the job. While Nigeria as a nation expects her school system to produce people who will impact positively on the society and contribute towards the building of a great and dynamic economy, a self-reliant nation, a land of bright and full opportunities for all citizens and a free and democratic society. The attainment of these objectives can only be contemplated if the Nigerian economy improves to help give a school system that is functional and effective. For Nigerian educational system to be at par with the developed countries, its system must be insulated from variables that may erode confidence in the system. Training and career development of the teachers must be done under a conducive environment. However, the recent trends in the society where there is a paradoxical increase in complaints regarding kidnapping, violence, theft, unemployment, strikes, inflation, insecurity, out of school children, terrorism, health pandemic, and other forms of crime are all threats to human security and students' academic achievement in Plateau State in particular and Nigeria at large. It is against this background that the study investigated the impact of economic depression and poverty on Chemistry Education students' academic achievement in Plateau State. Consequently, the problem of the study can be seen in the following broad question: What is the impact of economic depression and poverty on undergraduate Chemistry Education students' academic achievement in universities in Plateau State, Nigeria?

#### **PURPOSE OF THE STUDY**

1. To examine the impact of economic depression and poverty on undergraduate Chemistry Education students' academic achievement
2. To determine the impact of social amenities on undergraduate Chemistry Education students' academic achievement

#### **RESEARCH QUESTIONS**

The following research questions were raised to guide the study;

1. What is the impact of economic depression and poverty on undergraduate Chemistry Education students; academic achievement?
2. What is the impact of social amenities on undergraduate Chemistry Education students' academic achievement?

#### **METHODOLOGY**

Descriptive survey research design was adopted for the study. A sample of 300 undergraduate Chemistry Education students from two universities was drawn from a student population of 1562, using purposive sampling technique. A researcher developed instrument known as "Impact of Economic Depression and Poverty on Undergraduate Chemistry Education Students' Academic Achievement Questionnaire (IEDPUCESAA)" was used for data collection. It was structured on a 4-point scale of Strongly Agree (A) = 4, Agree (A) = 3, Disagree (DA) = 2, AND Strongly Disagree (SDA) = 1. The instrument was validated by three experts from the Department of Science and Technology Education, University of Jos, Plateau State. After pilot-testing the instrument, Kuder-Richardson (K-R<sub>21</sub>) formula yielded a coefficient of 0.67. Mean and standard deviation were used to analyze the data for answering the research questions. A mean score of 2.50 was taken as "Agree". A mean score below 2.50 were rejected.

## RESULTS

**Research question 1:** What is the impact of economic depression and poverty on undergraduate Chemistry Education students' academic achievement?

**Table 1: Mean and standard Deviation Scores on the Impact of Economic Depression and Poverty on Respondents' Achievement.**

S/N	ITEM Description	Mean	STD	Decision
1	I cannot acquire good textbooks for my studies	2.88	1.07	Agree
2	I cannot acquire a copy of computer to ease my studies	3.10	0.88	Agree
3	I cannot easily buy and use data to google to study	2.92	1.08	Agree
4	I cannot easily photocopy my learning materials	2.93	1.06	Agree
5	I have no smartphone to go on line for study materials to enhance my studies	2.95	1.01	Agree
<b>Grand mean</b>		<b>2.96</b>	<b>1.02</b>	<b>Agree</b>

Table 1 shows the mean and standard deviation of the impact of economic depression and poverty on undergraduate Chemistry Education students' academic achievement, in respect of learning materials. The items on the table have their mean scores and standard deviation scores ranging between 2.88 to 3.10 and 0.88 to 1.08 respectively. The grand mean score of the table stands at 2.96 with a standard deviation of 1.02. What this shows is that respondents agreed with all the items on the table that, in view of learning materials, there is impact of economic depression and poverty on their academic achievement.

**Research question 2:** What is the impact of social amenities on undergraduate Chemistry Education students' academic achievement?

**Table 2: Mean and Standard Deviation Scores of the Impact of Social Amenities on Undergraduate Chemistry Education Students' Academic Achievement**

S/N	Item Description	Mean	STD	Decision
6	The epileptic power supply affects my studies	2.90	1.07	Agree
7	Inadequate supply of water affects my studies	2.85	1.01	Agree
8	Bad roads delay me from reaching school on time and this affect my studies	2.90	0.94	Agree
9	Lack of WIFI to access materials online affects my studies	2.86	1.08	Agree
10	Lack of adequate supply of drugs in the University clinic affects my health and studies	2.84	1.11	Agree
11	Lack of standby generator that can carry all the equipment in the University for efficient service delivery affects my studies	3.33	0.79	Agree
12	I cannot cook once there is no PHCN light and therefore, cannot read when I am hungry and this affect my performance	2.69	0.02	Agree
13	I cannot afford cooking gas	2.80	0.06	Agree
14	I cannot afford kerosene for cooking	2.82	1.09	Agree
<b>Grand mean</b>		<b>2.89</b>	<b>0.78</b>	<b>Agree</b>

Table 2 presents the mean and standard deviation scores of responses of respondents on the impact of social amenities on undergraduate Chemistry Education students' academic achievement. The mean scores and standard deviation scores of the respondents range between 2.81 to 3.33 and standard deviation between 0.02 to 1.11. The grand mean and standard deviation scores of the table stand at 2.89 and 0.78 respectively, indicating that respondents agree with all the items on the table as the impact of social amenities on undergraduate Chemistry Education students' academic achievement in Plateau State.

## FINDINGS AND DISCUSSION

Analysis of the data revealed that with grand mean score of 2.96 and standard deviation 1.02, with the dearth of learning resources, there is the impact of economic depression and poverty on the academic achievement of undergraduate students in Plateau State. The study also found that with a table grand mean score of 2.89 and standard deviation 0.78, there was impact of social amenities on undergraduate Chemistry Education students' academic achievement in Plateau State. The findings indicate that Chemistry Education students lack learning resource materials and social amenities due to economic depression and poverty, significantly affecting students' academic achievement in universities in Plateau State. These findings agree with the view of Dike (2017) who argued living in poverty upsets brain development and will result in behavioural problems in the classroom, leading to poor academic achievement. Maffea (2020) referred to the situation where teachers teach students different subjects without proper resources wicketed. The author lamented that the wicketed problem at hand, is the lack of resources in the classrooms. Lack of resources in the classroom affects students and lecturers which in turn can affect parents. Lack of resources in the classroom can result in extreme distress on the part of students and lecturers as well. Not only are students in distress, they are unable to learn to their fullest potentials as well.

## CONCLUSION AND RECOMMENDATIONS

Based on the findings, the study concluded that Chemistry Education students' academic achievement is an essential aspect of the university management which cannot be overlooked. These are teachers who are on -the-job-training for effective career development. The study hoped that poverty reduction in the Plateau State universities could consequently enhance students' academic achievement.

The study made the following recommendations, based on the findings:

1. Since the use of instructional materials enhanced academic achievement of students in Chemistry, the materials should be used in the teaching of Chemistry.
2. The government of Plateau State needs to pay lecturers well so as to improve their productivity.
3. Seminars, workshops and conferences should be organized by the Plateau State Ministries of Education where teachers and curriculum planners will be taught the application and use of the internet for effective teaching of Chemistry.
4. School administrators and proprietors of both private and public schools should ensure that their schools are provided the necessary instructional materials for the teaching of Chemistry and other science subjects.
5. Teachers should always ensure that instructional materials used in teaching Chemistry are suitable for the age and level of students.

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