

# Climate Change, Communication, and Education: Bridging Gaps for a Sustainable Future; Case Study of First-Year Social Science Students of Federal University Dutse.

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## ABSTRACT

This succinct abstract examines the complex interactions among education, communication, and climate change, acknowledging the need for all three to tackle the pressing global issue of the climate crisis. The target population of this study is social science students of federal university dutse, the sample size is 100 students where 100 questionnaires were distributed but only 80 were returned which is 80% of the distributed questionnaire. Descriptive analysis is used to analyze the data and the chi-square method is used to test the hypothesis. The study explores cutting-edge instructional strategies that provide students with climate literacy, seeing education as a catalyst for changing behavior and making well-informed decisions in addition to providing information. By combining these components, the study provides a thorough analysis of the relationships that exist between education, communication, and climate change among students of Federal University Dutse Jigawa State Nigeria. It urges researchers, teachers, and communicators to work together to create narratives and instructional frameworks that motivate people to commit to sustainability as a group. This study encourages interdisciplinary interaction in addressing the necessity of informed communication and transformative education as we face the difficulties of a changing climate.

**Keywords:** Climate change, Communication, Education

## INTRODUCTION

All Climate change is an existential threat that demands collective action and global cooperation (Lubarda & Forchtner, 2023). To address this challenge effectively, communication and education play pivotal roles in fostering awareness, understanding, and engagement. This article explores the intersection of climate change, communication strategies in tertiary institution students, and educational initiatives, emphasizing the need for informed and empowered communities to create a sustainable future.

Global public and scientific communities alike are becoming more aware of climate change as more reports indicate that the Earth will warm, sea levels will rise, ice will melt, and precipitation patterns will shift (Mejía-Cáceres et al., 2023). Sea level rise is a result of climate change, which has already shown itself in the form of rising surface temperatures and melting glaciers and Arctic sea ice. In some regions of the world, these changes have pushed the shoreline farther and put coastal populations in danger (Dhiman, 2023). Although there is ample evidence of a changing climate and trustworthy models that forecast future changes in the climate, opinions on the causes of climate change remain divided, with some supporting the anthropogenic nature of climate change and others clinging to the idea that climate variability is primarily caused by external forcing from the Sun (Maibach et al., 2023).

### 1. The Importance of Effective Communication:

Effective communication is essential in conveying the urgency and complexity of climate change. Scientists, policymakers, and communicators face the challenge of translating scientific data into accessible and compelling narratives. Communicating climate change involves not only disseminating facts but also connecting with diverse audiences emotionally (Maibach et al., 2023).

## 2. Education as a Catalyst for Change:

Formal and informal education systems are key components in building climate literacy and fostering a sense of responsibility. Integrating climate change topics into school curricula helps equip the next generation with the knowledge and skills needed to address environmental challenges. Beyond classrooms, public outreach programs and community workshops play a vital role in empowering individuals to take sustainable actions (Maibach, 2023).

This study of communication and education in climate change bridges many gaps as are done in dutse Jigawa state Nigeria Africa, this makes it different from other research. The research is based on a quantitative approach and a descriptive research method was applied, chi-square is used to test the hypothesis of this study, this study offers some modifications and new majors for communicating climate change education. The main objective of this study was to analyze the effectiveness of changes in attitude and perception that might occur in tertiary institutions if climate change education course is well communicated and to test the following hypothesis.

H1: the effectiveness of climate change education in Nigerian institutions helps in changing the beliefs and attitude of the first-year students of the federal university Dutse.

## MATERIALS AND METHODS

The study is a survey of descriptive research, descriptive study is confirmatory, as such it could be used to test hypotheses (Shreffler & Huecker, 2023). The study adopts a Likert's interval scale of measurement. The instrument used in the collection of data is a questionnaire which is being used in the collection of primary data it was adopted and modified from Maibach, E (2023). The secondary data are previous research done by past authors. The chi-square statistical method is used for data analysis and hypothesis testing. The error margin of 5% is used in checking the table value of the Chi-square if the calculated value of the chi-square statistical method is greater than the table value this renders the hypothesis to be rejected and if the calculated value is lesser than the table value then the hypothesis is to be accepted.

### *Research population*

The target population of the study is the first-year social science students of a federal university dutse this study was trying to evaluate and test if early communication and education on climate change can be effective in changing their beliefs, attitudes, and perspectives on climate change, in dutse Jigawa state Nigeria. The population of this study is one hundred (100) first-year students of social science.

### *The procedure of data collections*

Method: This consists of collecting data by distributing questionnaires to the target population which will enable the researcher to know how much knowledge the students have on communicating climate change education. 100 questionnaires were administered, 80 were returned, and 20 were not returned. Response rate= questionnaire returned/questionnaire administered \* 100 = 80/100 x 100 = 80%

## RESULTS

The effectiveness of climate change education in Nigerian institutions helps in changing the believes and attitude of the first-year students of federal university Dutse.

Options	Frequency	Percentage %
Strongly agreed	50	62.5
Agreed	15	18.75
Disagreed	10	12.5
Strongly disagree	5	6.25
Total	80	100

Fo	Fe	Fo – fe	(fo – fe) <sup>2</sup>	$\frac{(fo - fe)^2}{fe}$
50	20	30	900	45
15	20	-5	25	1.25
10	20	-10	100	5
5	20	-15	225	11.25
80	80	0	1250	62.5
Fe = 80/4 = 20    k-1 = 4-1 = 3				

The error margin is 5% and the degree of freedom is 3 the table value is 78.15 since the calculated value of chi-square is less than the table value. The hypothesis is accepted

H1: the effectiveness of climate change education in Nigerian institutions helps in changing the beliefs, attitudes, and perceptions of the first-year students of federal university Dutse.

## DISCUSSION

The result of this study showed that the course produced significant changes in the beliefs concerning the anthropogenic causes of climate change and vulnerability to its impact, which results in inequality of the impact received. As the knowledge its impact to the students which currently differentiates their perception from that of the other students, this reveals that the students already had desirable attitudes towards climate change and these attitudes had not been reinforced. The student’s perception of the importance of different institutions, different ministries, organizations, and local governments in climate change actions increased by the end of the course. Multi-media aid learning, debates, and discussions were useful in conveying the concept of the course, but also students leading a community education on climate change project will increase the personal significance of the course

## CONCLUSION

In the face of climate change, communication and education emerge as powerful tools for catalyzing positive change. By leveraging media platforms, enhancing educational curricula, and fostering community engagement, society can build a foundation for informed decision-making and sustainable practices. As we navigate the complexities of a changing climate, a well-informed and educated global community becomes the driving force behind a more resilient and sustainable future. Based on the findings, this study recommends teaching the next generations from the high school level a subject of its own that covers the key point of climate change and how to overcome it, organizing more seminars, conferences, and workshops, a program on climate change should be organized and to be aired weekly in TV station and Radio station, the society will keep on voicing out until the people with power heard the voice.

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