



## THE IMPACT OF SCIENCE EDUCATION ON SOCIO-ECONOMIC RECONSTRUCTION IN ONDO TOWN

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### Abstract

The study examined the impact of science education on socio-economic and political restructuring in Ondo State, Nigeria. The state is facing challenges such as high inflation, huge foreign debts, infrastructure deficit, high unemployment, and insecurity, exacerbated by the removal of fuel subsidies and the presence of bandits, gunmen, and kidnappers. The study raised and answered three research questions and used a descriptive survey design, administering 50 validated questionnaires to ten science teachers in five public schools in Ondo. The data collected was analyzed using simple percentages and means. The findings revealed significant challenges in the socio-economic and political sectors of Ondo State and suggested that a comprehensive focus on teaching and learning science education could offer solutions to these challenges. As a result, it is recommended that the government at all levels and education stakeholders prioritize science education across all levels of education in Ondo State.

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**Keywords:** science education, socio-economics, political restructuring

### Introduction

The economy of Ondo state is the 6th largest in Nigeria and is dominated by crude oil and crop production. Ondo town serves as the trade centre for the surrounding region, being the largest producer of cocoa products in the region and crops like yams, cassava, and aso-oke, which is largely accepted as the local attire. Traditional industries include cloth-wearing, tailoring, carpentry, and blacksmithing. However, the region is facing challenges such as high inflation, huge foreign debts, infrastructure deficit, high youth unemployment, and insecurity. This has led to a recession, which worsened with the COVID-19 outbreak in 2020, and the recovery since then has remained sluggish.

Socioeconomics is primarily concerned with the interplay between social processes and economic activity within a society. Due to the struggling economy, Ondo town is overwhelmed with challenging circumstances. These include human adversity, collapsing institutions, a disenfranchised populace, and a sense of despair and despondency. There is a rise in incivility, with tempers flaring without notice. Arguments in public places quickly degenerate into insults and bitter relations, with expletives and foul language becoming common. Bad road networks, unreliable electricity, inadequate water supply, unemployment, and underemployment are significantly contributing to the declining economy. The region is in dire need of social reconstruction (Ossai & Nwalado 2015). The activities associated with the governance of a country or area, especially the debate between parties having power, are known as politics. Some of the political challenges in Ondo include conflicts by political opposition, instability, communal, ethnic, and resource allocation rivalries, as well as insecurity, crime, corruption, and injustice in every sector. Failed promises made by politicians discourage people and lead to distrust and frustration. There are also instances of violence and crime, which result in the production of dissolute political elites (Adewale Akingbade, 2012). The way forward is to rebuild the sector.

Socio-economic and political reconstruction refers to efforts made by individuals, groups, and the government to refurbish and strengthen the socio-economic and political system after a period of



instability (Olugbamila & Adeyinka, 2017). In Ondo, socio and political reconstruction can be a complex and multifaceted issue. However, potential strategies for reconstruction include investing in education, workforce development programs, promoting small businesses and entrepreneurship, implementing policies for more equitable distribution of resources and opportunities, improving infrastructure and public services, fostering greater community engagement, establishing democratic institutions (such as a free and fair electoral system), promoting good governance practices, and protecting human rights.

Reconstructionist education views the school as a key social institution that can identify areas of social problems and promote positive social change in the community. According to Brameld (1959), the school should influence society, but society should also influence the school. This means that educational efforts should flow from the school to the society ("centrifugal forces") and from the society to the school ("centripetal forces"). In this approach, both the school and the larger society play a role in shaping educational programs and addressing social issues. This integrated approach aims to address cultural crises by studying societal problems from multiple perspectives and taking necessary actions to solve them.

Education is a purposeful activity aimed at achieving specific goals, such as transmitting knowledge and fostering skills and character traits. Science education focuses on sharing science content, social science, and the process of teaching science to develop the necessary abilities and understanding. It aims to promote scientific literacy, which refers to an individual's scientific knowledge and its application. Scientific literacy enables individuals to understand the scientific process and apply evidence-based knowledge to a wide range of issues requiring individual and collective action (IAP Science Education Programme, 2021).

The goals of 21st-century education include providing access to education, improving its quality, promoting relevance, ensuring equity and inclusivity, and encouraging lifelong learning. Science education can play a significant role in facilitating socio-economic and political reconstruction in the 21st century in the following ways:

- **Technological Innovation:** Science can facilitate technological innovation in various fields such as agriculture, medicine, engineering, and information technology. With modern and innovative technology, farmers in Ondo can increase crop yields, food production, and marketing of agricultural produce. In the field of medicine, science education can help to develop new drugs, vaccines, and treatments for prevalent diseases.
- **Job Creation:** Science education can create employment opportunities through innovation and entrepreneurship. New technologies and products can be developed, leading to the creation of new businesses and industries.
- **Economic Growth:** Science education can contribute to the growth of the economy by promoting research and development. Through research and development, new products and services that can attract foreign investors, leading to economic growth, can be developed.
- **Global Competitiveness:** Science education can make the town more competitive in the country and globally. A skilled workforce that can work in various industries makes the town an attractive destination even for foreign investors.
- **Political Stability:** Science education can promote political stability by creating a more informed electorate. With science education, the indigenes can become better informed about political issues and make more informed decisions when electing their leaders.

## Statement of the Problem

After the outbreak of the COVID-19 pandemic in 2020, the overall performance of the economy in Ondo town reveals structural and institutional challenges that need to be addressed. Political competition and resource allocation rivalries, fueled by corruption, have plunged the town into a state of decadence. Rebuilding to reduce the aforementioned challenges is crucial. Education is an instrument for reconstruction and development. Researchers have explored different aspects of education to reconstruct socio-economic and political challenges, but the reconstruction of the socio-economic and political sector using the instrumentality of science education in Ondo town has not been examined. Hence, the study investigates the impact of science reconstruction in Ondo town.

### Research Questions

1. What are the challenges encountered in the socio-economic sector in Ondo town?
2. What are the problems facing the political sector in Ondo town?
3. How can Science education aid reconstruction in the socio-economic and political sectors in Ondo town?

### Methodology

The research adopted a descriptive survey design to investigate the impact of science education on socio-economic and political reforms in Ondo town. The target population consisted of all science teachers in public secondary schools in Ondo. A simple random sampling technique was used to select ten (10) teachers each from five public secondary schools in Ondo West Local Government Area, making a total sample of 50 teachers. A self-developed questionnaire was used to collect data, with response options including "Strongly Agree," "Agree," "Strongly Disagree," and "Disagree." The questionnaire's validity was confirmed by experts in various science fields at Adeyemi Federal University of Education, Ondo, and adjustments were made to align it with the research objectives. A pilot test was conducted to assess the questionnaire's reliability, resulting in a test-retest reliability coefficient of 0.83 using. Data analysis was performed using simple percentages.

### Results

**Research Questions 1:** What are the challenges encountered in the socio-economic sector in Ondo town?

**Table 1:** Respondents' view on the challenges encountered in the socio-economic sector in Ondo town

S/N	ITEMS	SA	A	D	SD	$\sum fx$	$\bar{x}$	Remarks
1.	Inflation of the prices of goods is a challenge facing the socio-economic sector	30 (120)	15 (45)	4 (8)	1 (1)	50 (174)	3.48	Agreed
2.	There is how yield of farm produce as a result of ethnic fights on farmland	32 (128)	15 (45)	2 (4)	1 (1)	50 (175)	3.56	Agreed
3.	Abandonment of farmlands due to incessant attacks on farmers by herders and kidnappers	40 (160)	5 (15)	3 (6)	2 (2)	50 (183)	3.66	Agreed
4.	Lack of funds or support from the government to adequately manage the farm.	28 (112)	16 (48)	4 (2)	2 (2)	50 (170)	3.40	Agreed
5.	Prolonged power outage paralyzes businesses dependent on light.	30 (120)	15 (45)	4 (8)	1 (1)	50 (174)	3.48	Agreed
<b>Cluster Mean (<math>\bar{x}</math>)</b>							<b>3.32</b>	

Table 1 depicts that the majority of the respondents attested to the statements that inflation, ethnic fights, herders’ attacks, lack of funds, and prolonged outrage are challenges facing the socio-economic sector in Ondo State with mean values of ( $\bar{x}$  = 3.48; 3.56; 3.66; 3.40; 3.48) respectively. A cursory look at the cluster mean ( $\bar{x}$ ) of 3.32 which is greater than the bench mean value ( $\bar{x}$ ) = 2.50 indicates that there are diversified challenges as aforementioned.

**Research Question 2:** What are the problems facing the political sector in Ondo State?

**Table 2:** Respondents' views on the problems facing the political sectors in Ondo State

S/N	ITEMS	SA	A	D	SD	$\sum fx$	$\bar{x}$	Remarks
1.	Failed promised from parties manifestoes	326 (104)	18 (54)	5 (10)	1 (1)	50 (167)	3.38	Agreed
2.	High level of corruption among politicians	34 (136)	13 (39)	1 (2)	2 (2)	50 (179)	3.58	Agreed
3.	Power tussles between opposing parties that affects the people at the grassroots.	32 (128)	15 (45)	2 (4)	1 (1)	50 (178)	3.56	Agreed
4.	Godfatherism beclouds free and fair election	30 (120)	12 (36)	2 (4)	6 (6)	50 (166)	3.32	Agreed
5.	Instability and unequal resource allocation in the various political zones.	28 (112)	14 (42)	2 (4)	6 (6)	50 (164)	3.28	Agreed
<b>Cluster Mean (<math>\bar{x}</math>)</b>							<b>3.42</b>	

Table 2 depicts that the majority of the respondents attested to the statements that failed promises, corruption, power tussle, Godfatherism, and instability are problems facing the political sector in Ondo with mean values ( $\bar{x}$  = 3.38; 3.58; 3.56; 3.32; 3.28) respectively, A cursory look at the cluster mean of 3.42 which is greater than the bench mean mark of 2.50 indicates that there are diversifying problems as aforementioned.

**Research Question 3:** How can science education aid the reconstruction of the socio-economic and political sectors in Ondo?

**Table 3:** Respondents' view on how science education can aid the socio-economic and political sector

S/N	ITEMS	SA	A	D	SD	$\sum fx$	$\bar{x}$	Remarks
1.	Science education can result in job creation	30 (120)	12 (36)	2 (4)	6 (6)	50 (166)	3.32	Agreed
2.	There can be economic growth due to in-depth teaching and learning of science education.	34 (136)	13 (39)	1 (2)	2 (2)	50 (179)	3.56	Agreed
3.	Science education can create awareness that will lead to political stability	30 (120)	15 (45)	4 (8)	1 (1)	50 (174)	3.3.48	Agreed
4.	Science education will promote global corruption	32 (128)	15 (45)	1 (2)	2 (2)	50 (177)	3.52	Agreed
5.	Science education will boost Technology innovation	26 (104)	18 (54)	5 (10)	1 (1)	50 (167)	3.38	Agreed
<b>Cluster Mean (<math>\bar{x}</math>)</b>							<b>3.45</b>	

Table 3 depicts that the majority of the respondents attested to the statement that in-depth teaching and learning of science education can aid the socio-economic and political reconstruction through job



creation, economic growth, political stability, global competition, technological innovation with the mean values of ( $\bar{x}$  = 3.32; 3.56; 3.48; 3.52; 3.38) respectively. A cursory look at the cluster mean = 3.45 which is greater than the benchmark mean of 2.50 indicates that science education can result in the aforementioned factors, that can aid socio-economic and political reconstruction in Ondo State.

### **Conclusion and Recommendation**

Based on the findings of this study, the following conclusions were drawn: The socio-economic sector in Ondo State faces various challenges, including inflation, ethnic conflicts, attacks by herders on farmers, and prolonged power outages. Urgent attention is needed to rebuild this sector. Additionally, the political sector of the state is plagued by issues such as unfulfilled promises, corruption, power struggles among competing parties, godfatherism, and instability, making reconstruction of the sector inevitable. A comprehensive focus on teaching and learning Science education across all levels of education could lead to job creation, economic growth, political stability, global competitiveness, and technological innovation, which would aid in the reconstruction of both sectors. Therefore, the study recommends that government at all levels and education stakeholders refocus political attention to prioritize science education across all levels of education in Ondo State.

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