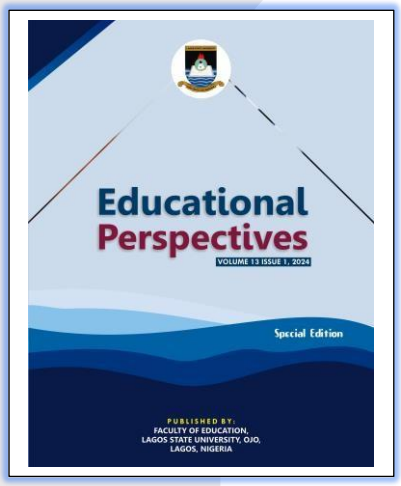

Secondary School Biology Teachers Conservative Attitudes Towards Educational Practices in Ilorin, Nigeria

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KEYWORDS:

Biology Teachers, Conservative Attitudes, Educational Practices, Educational Change, Resistance

WORD COUNT: 181

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ABSTRACT

Education is vital for societal development, and teaching methods significantly impact educational outcomes. This study examines the conservative attitudes of secondary school biology teachers in Ilorin towards educational practices, identifies factors contributing to resistance, and proposes strategies to support the transition to modern teaching methods. Utilizing a descriptive survey design, data were collected from 154 biology teachers using a structured questionnaire. Data collected were analysed using mean, mean rating and SD. Findings reveal a strong preference for traditional lecture-style teaching and skepticism towards modern practices, primarily due to a lack of training, personal comfort with established methods, inadequate resources, and pressure to prioritize exam results. Cultural norms also play a significant role in resistance. To address these barriers, the study recommends regular professional development workshops, adequate resource allocation, and mentorship programs. These strategies aim to equip teachers with the necessary skills, confidence, and support to embrace innovative teaching practices, ultimately fostering educational development and better preparing students for future challenges. Implementing these recommendations can bridge the gap between traditional and modern teaching methods, promoting a more dynamic and effective learning environment.

HOW TO CITE

Abidoye F.O & Aladesuyi D.A. (2024). Secondary School Biology Teachers Conservative Attitudes Towards Educational Practices in Ilorin, Nigeria. *Educational Perspectives, 13*(1), 165-172.

Introduction

Education is the cornerstone of societal development. A society with educated citizens tends to be more advanced compared to one that is predominantly illiterate. The significance of education is universally acknowledged, and every society formulates its own educational policies, focuses, and philosophies to achieve its goals and aspirations

The traditional purpose of education has evolved from merely imparting knowledge to fostering creative thinking and talent cultivation. Modern education prioritizes inspiring students' creativity over rote examination preparation. Research indicates that modern teaching methods enhance communication and learning motivation, although traditional lecture-style teaching remains effective for improving test scores (Schwerdt & Wuppermann, 2011; Boumová, 2014).

Teachers, being one of the important resources in implementing curriculum, the implementation of Biology curriculum have been a matter of serious concern to Biology educators. This concern arises from the fact that Biology occupies a central position in the scientific and technological development of any Nation (Maduabum, 1998). Biology teachers are involved in effective implementation of biology curriculum so that students after learning biology topics will exhibit changes in their behaviors that will enable them contribute effectively and efficiently to national and international development (Nwachukwu, (2015). Biology teacher also occupies a strategic position as the quality of teachers in any educational system determines to a large extent the quality of the system itself (NPE, 2004).

In the current educational landscape, suitable teaching methods are crucial for achieving promising learning outcomes and equipping students with 21st-century skills. Technological advancements have revolutionized teaching, particularly in science subjects (Kalolo, 2019; Oke & Fernandes, 2020; Castro & Tumibay, 2021). Successful educational reform depends significantly on teachers' values, practices, and beliefs, which shape the implementation of changes (Hargreaves & Goodson, 2006; Sannino, 2010). However, teacher resistance to change is a common barrier, driven by personal dispositions, comfort with familiar methods, and fear of the unknown (Day & Smethem, 2009; Ng, 2009; Després, 2013).

Educational change should build on the existing knowledge, skills, and attitudes of students, teachers, and administrators, employing diverse methods to adapt effectively to a rapidly evolving society (Ibrahim, 2013). Resistance to change can impede educational development and reform. Factors contributing to resistance include lack of perceived personal benefit, discomfort with new methods, and inadequate support systems (Després, 2013; Park & Jeong, 2013; Ibrahim, 2013). Teacher support from school principals, government agencies, and academic institutions is crucial for successful curriculum implementation (Chimbunde & Kgari-Masondo, 2020).

Recent methodological advancements show that new educational practices can be as effective, if not more so, than traditional methods, especially for underrepresented students (Hurtado, Cabrera, Lin, Arellano & Espinosa, 2009; Estrada, Burnett, Campbell, Campbell, Denetclaw, Gutiérrez & Okpodu, 2016; Theobald, Hill, Tran, Agrawal, Arroyo, Behling, & Freeman, 2020). However, educational institution has been slow to adopt these innovations, often sticking to traditional lecturing methods

Despite the evident benefits of modern teaching methods, a significant gap exists in their widespread implementation. The resistance to change among educators, coupled with insufficient support and resources, hinders the transition to these innovative approaches. Addressing these challenges through targeted research, policy reform, and enhanced support systems can bridge this gap, enabling the education system to better prepare students for the future. This research aims to explore these barriers and identify effective strategies for facilitating the adoption of modern teaching practices.

Objectives

The study examines secondary school biology teachers' conservative attitudes towards educational practices in Ilorin. Specifically, the study investigated;

1. the prevalent conservative attitudes towards educational practices among biology teachers in Ilorin?
2. the factors contributing to biology teacher resistance to educational practices in Ilorin?
3. the strategies for supporting biology teachers in the transition to modern teaching practices?

Research Questions

The following research questions guided the study;

1. What are the prevalent conservative attitudes towards educational practices among biology teachers in Ilorin?
2. What are the factors contributing to biology teacher resistance to educational practices in Ilorin?
3. What are the strategies for supporting biology teachers in the transition to modern teaching practices?

Methodology

The study employed the descriptive survey design. The population of the study comprised five hundred and eighty-nine (589) senior secondary school biology teachers in both government schools and private schools of Ilorin, Kwara State, Nigeria. The sample size of the study comprised 154 senior secondary school teachers representing about 25% of the population of teachers in Ilorin, Kwara State, Nigeria. The simple random technique was adopted to select the respondents. The instrument for data collection for this study was a structured questionnaire. The questionnaire was made up of two sections (Section A and Section B). Section A consisted of demographic data and Section B consisted of 15 items on biology teacher's conservative attitudes towards educational practices in Ilorin. The scales for the questionnaire were coded as: 4= Strongly Agreed, 3= Agreed, 2= Disagreed, 1= Strongly Disagreed. The instrument was validated by three experts in the area of study. The reliability of the instrument was determined by administering it to 20 senior secondary school teachers in Ilorin that were not part of the sample. The result obtained was 0.73 which indicated that the instrument was reliable. The researcher, with a trained research assistant administered the instruments to the respondents. The data collected were analysed using mean (x) and standard deviation (SD) statistical tool to answer the research question. The decision rule was based on any calculated mean (x) equal or greater than 2.50 which was regarded as strongly disagreed, values within the range of 1.50 – 2.49 were regarded as agreed and 0.50 – 1.49 were regarded as disagreed and 0.49 and below were regarded as strongly disagreed.

Results: Research Question 1: What are the prevalent conservative attitudes towards educational practices among biology teachers in Ilorin?

Table 1: Mean Rating of Respondents on prevalent conservative attitudes towards educational practices among biology teachers in Ilorin.

S/N	Items	Mean	Mean Rating
1	Biology teachers prefer traditional lecture-style teaching methods over modern approaches.	3.11	4th
2	Biology teachers believe that rote memorization is more effective than fostering creativity in students.	2.91	5th
3	Biology teachers tend to resist changes in curriculum and teaching methods due to their attachment to established practices.	2.99	3rd
4	Biology teachers perceive modern educational practices as less effective in improving students' academic performance compared to traditional methods.	3.01	2nd
5	Biology teachers express skepticism towards the integration of technology in the classroom, preferring traditional teaching aids.	3.57	1st
	Grand Mean	**3.12**	

Table 1 showed that the highest rating (3.57) indicates a strong skepticism towards integrating technology in classrooms, preferring traditional aids. Teachers also believe (mean rating 3.01) that modern educational practices are less effective than traditional methods in improving academic performance. With a mean rating of 2.99, they resist changes in curriculum and teaching methods due to attachment to established practices. Additionally, they prefer lecture-style teaching (mean rating 3.11) over modern approaches. The lowest rating (2.91) reflects a belief in the effectiveness of rote memorization over fostering creativity, though this attitude is less strongly held. Overall, biology teachers in Ilorin show a marked preference for traditional methods and resistance to modern educational innovations.

Research Question 2: What are the factors contributing to biology teacher resistance to educational practices in Ilorin?

S/N	Items	Mean	SD	Remarks
1	Lack of training and professional development opportunities contributes to biology teachers' resistance to adopting new educational practices.	3.12	0.83	Agree
2	Fear of inadequate resources and support from school administration hinders biology teachers from embracing innovative teaching methods.	2.94	0.79	Agree
3	Personal preferences and comfort with familiar teaching methods significantly influence biology teachers' resistance to change.	2.99	0.73	Agree
4	Perceived pressure to prioritize exam results over student engagement and critical thinking skills leads to resistance among biology teachers.	2.91	0.89	Agree
5	Cultural and societal norms emphasizing hierarchy and authority within the education system contribute to resistance towards educational reforms among biology teachers.	3.41	0.91	Agree
	Grand Mean	**3.07**		

Table 2 revealed that all the items were responded to positively, based on the benchmark of 2.5. The teachers claimed factors contributing to biology teacher resistance to educational practices includes: Cultural and societal norms emphasizing hierarchy and authority within the education system contribute to resistance towards educational reforms among biology teachers (3.41); Lack of training and professional development opportunities contributes to biology teachers' resistance to adopting new educational practices (3,12); Personal preferences and comfort with familiar teaching methods significantly influence biology teachers' resistance to change (2.99); Fear of inadequate resources and support from school administration hinders biology teachers in Ilorin from embracing innovative teaching methods (2.94) and Perceived pressure to prioritize exam results over student engagement and critical thinking skills leads to resistance among biology teachers (2.91). Cumulatively, the grand mean of 2.92 indicated that there are factors contributing to biology teacher resistance to educational practices in Ilorin.

Research Question 3: What are the strategies for supporting biology teachers in the transition to modern teaching practices?

S/N	Items	Mean	SD	Remarks
1	Providing ongoing professional development workshops tailored to the needs of biology teachers can support their transition to modern teaching practices.	3.71	0.81	Agree
2	Establishing mentorship programs where experienced educators guide and support biology teachers can facilitate their adoption of modern teaching methods.	3.64	0.80	Agree
3	Allocating sufficient resources and technology infrastructure to schools can empower biology teachers to integrate modern teaching tools into their classrooms.	2.99	0.73	Agree
4	Encouraging a collaborative learning environment where biology teachers can share best practices and innovative ideas fosters a culture of experimentation and growth.	3.10	0.77	Agree
5	Advocating for policy reforms at the governmental level to prioritize the implementation of modern teaching practices and provide support for educators	2.81	0.78	Agree
	Grand Mean	**3.30**		

Table 3 revealed that items 1, 2, 3, 4 and 5 with mean scores of 3.71, 3.64, 2.99, 3.10 and 2.81 were responded to positively, based on the benchmark of 2.5. Cumulatively, the grand mean of 3.30 indicated that they are strategies for supporting biology teachers in the transition to modern teaching practices.

Discussion of Findings

The findings on prevalent conservative attitudes towards educational practices among biology teachers in Ilorin revealed that biology teachers in Ilorin exhibit a strong preference for traditional teaching methods. This is as a result of teachers feeling more comfortable and effective with familiar traditional aids, perceiving them as more reliable. The findings of the study is in agreement with Schwerdt and Wuppermann (2011) who investigated is traditional teaching really all that bad? A within-student between-subject approach, indicated that traditional lecture-style teaching remains prevalent due to its perceived effectiveness in improving test scores. Furthermore, biology teachers believe that modern educational practices are less effective in improving academic performance compared to traditional methods. This is also in agreement with Després (2013) who observed a question of resistance to home education and the culture of school-based education notes reported that teachers frequently rely on familiar methods due to personal comfort and perceived reliability, supporting this finding.

The findings on factors contributing to biology teacher resistance to educational practices in Ilorin revealed that there are several factors that contribute to biology

teachers' resistance to adopting new educational practices; cultural and societal norms that emphasize hierarchy and authority within the education system play a significant role. These norms create an environment resistant to change, reinforcing traditional practices. This is in agreement with Ibrahim (2013) who observed teacher resistance to educational change reported that hierarchical structures within education systems can create resistance to change by maintaining established roles and practices. This is also in agreement with Day and Smethem (2009) who observed the effects of reform: Have teachers really lost their sense of professionalism reported that personal preferences and comfort with familiar teaching methods also play a significant role in resistance.

The findings on strategies for supporting biology teachers in the transition to modern teaching practices revealed that providing ongoing professional development workshops is seen as crucial. Such workshops can equip teachers with the necessary skills and knowledge to implement new methods effectively. This is in agreement with Chimbunde and Kgari-Masondo (2020) who observed representation of the Zimbabwean 2015-2022 social studies curriculum highlight that mentorship can play a key role in helping teachers transition to new practices. Also, Hurtado et al. (2009) argue that policy reforms are necessary to support the widespread implementation of modern and modern educational practices.

Conclusion

Based on the findings of the study, there is a strong preference for traditional teaching methods among biology teachers in Ilorin, driven by various factors such as cultural norms, lack of professional development, personal comfort with familiar methods, inadequate resources, and pressure to prioritize exam results. However, strategies such as professional development workshops, mentorship programs, adequate resource allocation, collaborative learning environments, and policy reforms can effectively support teachers in transitioning to modern educational practices. Addressing these barriers through targeted interventions is essential for fostering educational development and better preparing students for future challenges.

Recommendations

Based on the result of the findings and the conclusion above, the following recommendations were made:

1. Regular professional development workshops tailored to the specific needs of biology teachers should be conducted. These workshops should focus on modern teaching techniques, technology integration, and innovative educational practices. Continuous professional development can help build confidence and competence in adopting new methods.
2. Schools should be equipped with sufficient technological infrastructure and resources to support modern teaching methods. Ensuring that teachers have access to the necessary tools and support can alleviate resistance and foster a more

positive attitude towards technology integration.

3. Mentorship programs should be established where experienced educators guide and support biology teachers in adopting modern teaching methods. Mentorship can provide practical insights, encouragement, and the necessary support to facilitate change.

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