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Dr. S.K. Bhatia**



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Would like to appeal to the learned readers to send us their views, counter views, suggestions, comments, and observations etc. via “Letters to Editor” (which will be published in the next Issue) on the articles published in this Journal so that an academic discussion may start and our efforts may become more participative and thereby more meaningful and interesting.

Editor-in-Chief

The Themes for the next Issue January-2027

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1. Valuing professionalism and training in Teacher Education courses.
2. Changes in perspectives on areas of research in Teacher Education.
3. Perspectives on how learning in Curriculum and Pedagogy are demonstrated in Teacher Certification Programs.
4. Perspectives on effective Evaluation Practices in Teacher Education Programs.
5. Innovations and Innovative practices in Teacher Education Programs.
6. Diversity and Inclusion: Different International perspectives.
7. Ensuring access and equity in high quality Teacher Education programs.
8. ICT-related Innovations and practices in Teacher Education Programs.
9. Policy Perspectives in Teacher and School Education.
10. Reports on related conferences, seminars and workshops, including International offerings.
11. The Prolonged Online Mode of Teaching-learning - Challenges, Innovative experiments, Findings.
12. Tailored Interventions in Learner-centered Education.
13. Blended Learning as an outcome of Online Learning.
14. Scope of starting B. Ed for Vocational Teachers (B.Ed.Voc.)
15. Artificial Intelligence in Teacher Education: Preparing Future Teachers for AI-Enabled Classrooms.
16. Teacher Education: Implications of Contemporary Wars and Their Global Impacts.

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1. Teachers' Professional Growth
2. Optimising Students' Achievement
3. Holistic Learning
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5. Objective Evaluative Strategies During the Prolonged Closure of schools.
6. Solving School Problems through Action Research
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9. Integrating the inputs of Arts, Music and Play during the classroom teaching-learning processes
10. Starting Job-linked Courses in Schools at the Secondary Level
11. School Education: Implications of Contemporary Wars and Their Global Impacts.

Thanks and Regards
Editor-in-Chief
Dr. S.K. Bhatia

Editorial



The circulation and readership of the *Journal of Teacher Education and Teaching* have been steadily increasing year after year, owing to the continued support, encouragement, and goodwill of our valued readers, contributors, and academic well-wishers. The journal has emerged as a vibrant platform for intellectual exchange, scholarly reflection, and professional discourse in the field of education.

The esteemed authors who contribute to this journal derive inspiration for their writings from a wide range of sources. Their scholarly pursuits are often shaped by self-motivation, reflective thinking, academic inquiry, and lived experiences rooted in diverse hereditary, social, cultural, environmental, and institutional contexts. The process of knowledge creation is further enriched by their engagement with contemporary educational challenges and evolving pedagogical realities.

At times, extraordinary global and societal events—such as epidemics, pandemics, wars, social transformations, and technological advancements—also become powerful catalysts for academic reflection and research. Such developments encourage scholars and practitioners to critically examine their impact on educational systems, professional practices, and human development, while exploring innovative ways to preserve, strengthen, and advance their respective domains of contribution.

In addition, several contributors take guidance from the themes and suggested topics published in the introductory pages of the journal. We warmly welcome all relevant research papers, reflective articles, and scholarly contributions. Every submission undergoes a rigorous review process, and we make sincere efforts to accommodate those manuscripts that receive strong recommendations from our learned reviewers and editorial experts.

It is heartening to note that many scholars read the editorial carefully and thoughtfully engage with the suggestions offered therein. In the previous editorial, contributors were encouraged to submit articles and research papers exploring the constructive, responsible, and innovative applications of Artificial Intelligence (AI) across diverse domains. It is gratifying that several authors responded to this call and contributed papers addressing various dimensions of AI. Their work highlights the importance of using AI not merely as a tool operated at the press of a button, but as a resource that requires informed, critical, and purposeful engagement in the pursuit of knowledge. The authors also emphasize that AI, when used judiciously, can help save time, reduce stress, and enhance productivity.

The other contributions in this issue are equally relevant and need-based, addressing contemporary concerns and enriching the existing body of knowledge in their respective fields. Collectively, the papers in this issue make meaningful contributions to educational discourse and research.

Scholars must have taken note of the tragic loss of human lives and the widespread destruction of infrastructure resulting from ongoing armed conflicts in different parts of the world. While the immediate consequences are borne by the regions directly affected, the repercussions extend far beyond national borders, influencing social, economic, and educational systems across the globe. Education, unfortunately, has not remained untouched by these disturbances. The disruption of educational activities in conflict-affected regions has posed serious challenges for students, teachers, and educational institutions. Many students pursuing higher education abroad have experienced uncertainty, psychological distress, and interruptions in their academic programmes. In several instances, students have had to return to their home countries as educational institutions in conflict-prone areas suspended their operations or faced severe disruptions. The emotional

and mental stress experienced by learners during such crises cannot be overlooked, as it often affects their academic progress, well-being, and future aspirations.

The indirect effects of conflict are equally significant. Disruptions in transportation, trade, communication networks, and the supply of essential commodities create challenges that impact societies worldwide. Educational institutions often face difficulties in maintaining normal operations due to economic instability, resource constraints, and uncertainties arising from such situations. Consequently, the smooth conduct of teaching, learning, research, academic exchanges, and international collaborations may be adversely affected. These developments raise an important question: Can education play a meaningful role in fostering peace and reducing the likelihood and consequences of conflict? Education has long been recognized as a powerful instrument for promoting mutual understanding, dialogue, empathy, respect for diversity, and responsible citizenship. Teacher education, in particular, has a crucial role in preparing educators who can nurture the values of peace, social harmony, and global citizenship among future generations.

In this context, we invite scholars, researchers, and practitioners to contribute articles and research papers that examine the relationship between education, peace-building, conflict resolution, global citizenship, and social cohesion. Contributions that explore the role of educational institutions, curricula, teachers, and communities in mitigating the adverse effects of conflict and promoting sustainable peace will be especially welcome. Such scholarly engagement can enrich educational discourse and contribute meaningfully to addressing one of the most pressing challenges of our times.

Scholarly contributions on themes related to artificial intelligence and the educational implications of armed conflicts are particularly welcome. The journal encourages authors to pursue topics that align with their interests, expertise, and research priorities in the field of teacher and school education. Recognizing the diversity of scholarly perspectives and areas of specialization, the journal welcomes submissions on a broad range of themes. In addition to the suggestive topics listed in the opening pages of this issue, authors are invited to submit manuscripts on any topic that contributes to the existing body of knowledge and advances the theory, policy, or practice of teacher and school education.

While the journal continues to receive a substantial number of articles and research papers in the area of teacher education, contributions from schools remain limited. Yet, school education constitutes an equally important focus of the journal, and a dedicated section is reserved exclusively for articles, reports, and papers arising from school-based experiences and innovations.

The journal welcomes contributions on a wide range of school education themes, including the development and implementation of innovative teaching-learning strategies, need-based curriculum design, the effective application of national education policies, the development and use of assessment and evaluation techniques, and reports on significant academic, co-curricular, and community-oriented initiatives undertaken by schools. Such contributions can provide valuable insights into educational practice and enrich the dialogue between theory and practice.

To strengthen this important component of the journal, our administrative team will actively reach out to schools and encourage teachers, school leaders, and practitioners to share their experiences, innovations, and best practices with the wider educational community.

It is our sincere hope that the collective efforts of researchers, teacher educators, teachers, and schools will continue to enrich educational discourse and contribute meaningfully to the advancement of teacher and school education.

Dr. S. K. Bhatia
Editor-in-Chief

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Effects of Field Trip and Expository Teaching Strategies on Biology Students' Academic Performance in Secondary Schools in Ikot Ekpene Local Government Area, Akwa Ibom State, Nigeria

Akpan, Esther Utibeabasi and Udoh, Lemuel Effiong

Abstract

This study investigated the “Comparative Effects of Field Trip and Expository Teaching Strategies on the Academic Performance of Biology Students”. The area of the study was Ikot Ekpene Local Government Area. Quasi-experimental design was adopted for the study. A sample size of 100 Senior Secondary Two (SS2) students from two secondary schools out of eight (8) public secondary schools were selected using criterion sample technique. Three research questions and three null hypotheses were formulated to guide the study. The instrument used for data collection was Biology Achievement Test (BAT) on the concept of Genetics. The instrument was validated using Split Half Method, Pearson Product Moment Correlation, and Spearman Brown Formula, producing a reliability coefficient of 0.71, which confirmed that the instrument was reliable. Data was analyzed using mean, standard deviation and t-test statistics. The results showed that Biology students taught the concept of Genetics using field trip teaching strategy performed significantly better than their counterparts taught using expository teaching strategy. The results also showed no significant difference between male and female students taught Genetics in biology using field trip and expository teaching strategies. Based on these findings, it is recommended amongst others that that government and non-government organizations should provide training for Biology teachers on the effective use of field-trip teaching strategies to improve students' retention and academic performance. This will help to enhance students' academic performance and retention irrespective of their learning abilities at Senior Secondary School level and beyond in Akwa Ibom State.

Keywords: Field Trip, Expository, Biology, Genetics, Academic Performance, Education.

Introduction

Education is widely recognized as a vital instrument for shaping human behaviour and developing responsible citizens who can contribute meaningfully to national development. According to Omotayo (2014), education is the process of imparting knowledge and developing learners' abilities through teaching, training, and schooling. In line with this, the Federal Republic of Nigeria (2013) stated that one of the major goals of education is to develop individuals into sound and effective citizens while providing equal educational opportunities for all. Similarly, Obidile (2016) explained that education aims at developing the mental, physical, social, and practical skills necessary for individuals to function effectively and contribute positively

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to society. These skills, competencies, values, and attitudes are acquired through different levels of education, including primary, secondary, and tertiary education.

The need to equip learners with relevant knowledge and practical competencies explains the inclusion of Biology as one of the core science subjects in the Nigerian secondary school curriculum (Ugwu, 2023). Biology, often described as the science of life, deals with the study of living organisms, their structures, functions, interactions, and relationships with the environment. The subject occupies a unique position in the school curriculum because it serves as a foundation for several science-related professions such as medicine, nursing, pharmacy, biochemistry, and agriculture. Beyond its academic importance, Biology contributes significantly to the scientific and technological advancement of a nation.

The Biology curriculum, like other science subjects, is activity-oriented and learner-centered. According to the Federal Ministry of Education (2014), one of the objectives of the Biology curriculum is to equip students with adequate laboratory and field skills. This implies that the teaching and learning of Biology should emphasize practical experiences and active student participation rather than mere memorization of facts. However, despite these objectives, the teaching of Biology in many Nigerian secondary schools is still dominated by the conventional “talk and chalk” method, where teachers play the active role while students remain passive listeners.

The conventional teaching method is largely teacher-centered, with students expected to listen, take notes, and answer questions with little opportunity for active participation. This method has contributed to students’ poor interest and low academic achievement in Biology, especially in external examinations such as the West African Senior School Certificate Examination. Piwuna, and Mankilik (2023) enumerated that reports by the West African Examinations Council (2020) revealed persistent poor performance among students in Biology. Many students also perceive Biology as too broad and difficult, particularly topics that require practical activities and field experiences. Kristina and Pavol (2016) observed that teaching has gradually shifted from the natural environment to the classroom, thereby reducing students’ interest and engagement in the subject.

Academic achievement refers to the extent to which learners attain educational goals and objectives. Aniaku (2013) described academic achievement as the successful accomplishment of educational tasks within a specified period. The persistent low achievement of students in Biology has raised concerns about the effectiveness of instructional methods used in teaching the subject. Adebayo (2011) noted that the poor performance of students in Biology reflects a disconnect between teachers and learners, thereby emphasizing the need for more innovative and student-centered teaching approaches. Researchers have identified several factors that influence students’ achievement in Biology, including teaching methods, students’ attitudes, interest, cognitive ability, and socio-economic factors.

Consequently, there is a growing need for Biology teachers to adopt teaching strategies that promote active learning and improve students’ understanding of difficult concepts such as Genetics and Ecology. Okeke (2018) emphasized that effective teachers do not rely on a single method but instead adopt strategies that best suit particular learning situations. One instructional strategy considered effective in enhancing students’ academic achievement and interest in Biology is the field trip teaching strategy.

Field trip is an instructional approach that allows students to learn directly from real-life environments outside the classroom. Abdul, Oyeronke, and Adunni (2015) defined field trip as a teaching strategy that provides

learners with direct experiences through observation and interaction with natural settings. It involves visits to places such as farms, zoos, forests, industries, parks, and game reserves for the purpose of gaining firsthand knowledge. The strategy is rooted in Vygotsky's socio-cultural theory, which emphasizes that learning occurs through social interaction and environmental experiences.

Field trips are particularly important in Biology because the subject focuses largely on living organisms and their interaction with the environment. Through field trips, students gain firsthand experiences that cannot easily be replicated within the classroom. Such experiences help learners develop observational skills, critical thinking, creativity, and better understanding of biological concepts. Ugwu (2023) noted that field trips are an essential extension of classroom instruction and a fundamental aspect of effective science teaching. Similarly, Omeodu and Abara (2018) observed that field trips expose students to new experiences and increase their interest and engagement in science learning.

Despite these benefits, field trips also present certain challenges such as inadequate funding, lack of supervision, safety concerns, time constraints, and students' misconduct. If not properly managed, these challenges may affect the effectiveness of the learning experience. As a result, some teachers still prefer the expository or lecture method of teaching because it is convenient for managing large classes and covering extensive content within a limited time.

Expository teaching strategies such as lecture and teacher demonstration are teacher-centered approaches in which the teacher serves as the primary source of knowledge. Although studies have shown that such methods are often less effective than innovative learner-centered approaches, they remain widely used in schools due to their simplicity and suitability for large classrooms. This suggests that both innovative and conventional methods may influence students' achievement differently depending on the learning context.

Another important factor that may influence students' academic achievement in Biology is gender. Gender refers to the physical, biological, psychological, and behavioural characteristics associated with males and females. Several studies have reported varying findings on the influence of gender on students' achievement in science subjects. For instance, Chibabi, Umoru, Onah, and Itodo (2018) reported significant differences in the achievement and retention of male and female Biology students. Oga and Effiong (2022) found that male students performed better in Biology, whereas Okwara, Anyagh, and Ikyaan (2017) reported higher achievement among female students. In contrast, Tambaya, Sabitu & Mutazu (2016) found no significant difference between male and female students' academic performance in Biology. These conflicting findings indicate that the influence of teaching strategies and gender on students' academic achievement in Biology remains inconclusive and requires further investigation.

It is against this background that the present study seeks to investigate the effects of field trip and expository teaching strategies on Biology students' academic performance in Ikot Ekpene Local Government Area of Akwa Ibom State.

Statement of the Problem

The major goal of teaching and learning in secondary schools is to ensure excellent student performance in the Senior School Certificate Examination (SSCE), which qualifies students for careers in related disciplines. However, students' performance in Biology in Akwa Ibom State has remained inconsistent and below

expectations, as revealed by data from the Akwa Ibom State Education Management Information System and the WAEC Chief Examiners' reports from 2020–2024. The reports identified students' poor understanding of important Biology topics such as genetics, nervous systems, evolution, biological processes, and ecosystems as major causes of the low performance. This poor performance may also be linked to the continued use of conventional lecture methods, which often limit students' active participation and understanding. If this trend continues, many students may fail to gain admission into Biology-related courses, leading to a shortage of skilled manpower in relevant fields. Therefore, there is a need to adopt more student-centred teaching strategies, such as field trips, which can improve students' understanding, retention, and meaningful learning through direct observation of organisms in their natural habitats.

Purpose of the Study

The main purpose of this study was to empirically investigate the effects of Field Trip and Expository teaching strategies on student's academic performance in Biology in Ikot Ekpene Local Government Area.

Specifically, the study seeks to:

- (i) Compare the academic performance of students taught Genetics in Biology using Field Trip teaching strategy and those taught using Expository teaching strategy.
- (ii) Compare the academic performance of male and female students taught Genetics in Biology using Field Trip teaching strategy.
- (iii) Compare the academic performance of male and female students taught Genetics in Biology using Expository teaching strategy.

Research Questions

On completion, this study will provide answers to the following research questions:-

- (1) What is the difference between the Mean academic performance scores of students taught Genetics in Biology using Field Trip teaching strategy and those taught using Expository Teaching strategy?
- (2) What is the difference between the mean academic performance scores of male and female students taught Genetics in Biology using Field Trip teaching strategy?
- (3) What is the difference between the mean academic performance scores of male and female students taught Genetics in Biology using Expository teaching strategy?

Research Hypotheses

The following null hypotheses were formulated to guide the study:

1. There is no significant difference between the mean academic performance scores of students taught Genetics in Biology using Field Trip teaching strategy and those taught using Expository teaching strategy.
2. There is no significant difference between the mean academic performance scores of male and female students taught Genetics in Biology using Field Trip teaching strategy.

3. There is no significant difference between the mean academic performance scores of male and female students taught Genetics in Biology using Expository teaching strategy.

Methodology

This study adopted a quasi-experimental research design using a post-test only approach to compare the effectiveness of field trip teaching strategy and expository teaching strategy on students' academic performance in Genetics in Biology. The study was conducted in Ikot Ekpene Local Government Area and involved a population of 2,516 Senior Secondary Two (SS2) students from 8 public secondary schools. Two schools were selected through criterion sampling based on the availability of qualified Biology teachers, experienced staff, and well-equipped laboratories, while intact classes were used to select 100 students, comprising 50 students in the experimental group and 50 students in the control group.

Data were collected using the Biology Achievement Test (BAT) on Genetics, which consisted of 20 multiple-choice questions. The instrument was validated by experienced Biology teachers and an expert in Evaluation and Research from the University of Uyo, while its reliability was established using the Split Half Method, Pearson Product Moment Correlation, and Spearman Brown Formula, producing a reliability coefficient of 0.71, which confirmed that the instrument was reliable. The experimental group was taught using field trip strategy, while the control group was taught using expository strategy. After the treatment, post-tests were administered, and the data collected were analyzed using mean, standard deviation, and independent t-test statistics to test the hypotheses of the study.

Results

Research Question 1

What is the difference between the mean academic performance scores of students taught Genetics in Biology using field trip teaching strategy and those taught using expository?

Table 1 Mean Academic Performance Scores of Students Taught Genetics in Biology Using Field Trip & Expository Teaching Strategies.			
Method	N	$\bar{x}$	Mean Difference
Field Trip	50	68.4	9
Expository	50	59.4	

The result revealed that students taught Genetics in Biology using the field trip teaching strategy had a higher mean performance score (68.4) than those taught using the expository teaching strategy (59.4), with a mean difference of 9, indicating a difference in performance between the two groups.

Hypothesis 1

There is no significant difference between the academic performance of students taught Genetics in Biology using field trip teaching strategy and those taught using expository teaching strategy.

Table 2	Independent T-Test Analysis of The Mean Academic Performance Scores of Students Taught Genetics in Biology Using Field Trip and Expository Teaching Strategies.						
Method	N	$\bar{x}$	SD	DF	t-cal	t-crit	Decision
Field Trip	50	68.4	14.03	98	3.803	2.000	*
Expository	50	59.4	13.18				

*significant at 0.05 level of significance.

The result showed that students taught Biology using the field trip teaching strategy had a higher mean performance score (68.4) than those taught using the expository teaching strategy (59.4). Since the calculated t-value (3.803) was greater than the critical t-value (2.000) at 0.05 level of significance, the null hypothesis was rejected, indicating a significant difference in the academic performance of students taught using the two teaching strategies, with field trip strategy proving more effective.

Research Question 2

What is the difference between the mean academic performance scores of male and female students taught Biology using field trip teaching strategy?

Table 3	Mean Academic Performance Scores of Students Taught Genetics in Biology Using Expository Teaching Strategy.		
Gender	N	$\bar{x}$	Mean Difference
Male	24	67.5	1.4
Female	26	68.9	

The result showed that female students taught Biology using the field trip teaching strategy had a slightly higher mean performance score (68.9) than male students (67.5), with a mean difference of 1.4, indicating a slight difference in performance between both groups..

Hypothesis 2

There is no significant difference between the academic performance of male and female students taught Genetics in Biology using field trip teaching strategy.

Table 4	T-Test Analysis of The Mean Academic Performance Scores of Male and Female Students Taught Genetics in Biology Using Field Trip Teaching Strategy.						
Gender	N	$\bar{x}$	SD	DF	t-cal	t-crit	Decision
Male	24	67.5	16.21	48	0.325	2.021	NS
Female	26	68.9	13.86				

NS = Not Significant at 0.05 level of significance.

The result revealed that female students taught Genetics in Biology using the field trip teaching strategy had a slightly higher mean performance score (68.9) than male students (67.5). However, since the calculated t-value (0.325) was lower than the critical t-value (2.021) at 0.05 level of significance, the null hypothesis was retained, indicating that there was no significant difference between the performance of male and female students taught using the field trip teaching strategy.

Research Question 3

What is the difference between the mean academic performance scores of male and female students taught Genetics in Biology using expository teaching strategy?

Table 5 Mean Academic Performance Scores of Male and Female Students Taught Genetics in Biology Using Expository Teaching Strategy.			
Gender	N	$\bar{x}$	Mean Difference
Male	26	60.1	1.4
Female	24	58.7	

The result showed that male students taught Biology using the expository teaching strategy had a higher mean academic performance score (60.1) than female students (58.7), with a mean difference of 1.4, indicating a slight difference in performance between both groups.

Hypothesis 3

There is no significant difference between the academic performance of male and female students taught Genetics in Biology using Expository Teaching Strategy.

Table 6 T-Test Analysis of Male and Female Students Taught Genetics in Biology Using Expository Teaching Strategy.							
Gender	N	$\bar{x}$	SD	DF	t-cal	t-crit	Decision
Male	26	60.1	12.50	48	0.370	2.021	NS
Female	24	58.7	14.08				

NS = Not significant at 0.05 level of significance.

The result showed that male students taught Genetics in Biology using the expository teaching strategy had a slightly higher mean academic performance score (60.1) than female students (58.7). However, the calculated t-value (0.370) was lower than the critical t-value (2.021) at 0.05 level of significance, indicating that there was no significant difference between the academic performance of male and female students taught using the expository teaching strategy.

Discussion of Results

The findings of the study showed that Biology students taught Genetics using the field trip teaching strategy performed better than those taught using the expository teaching strategy. This suggests that the field trip method was more effective in improving students' academic performance. The improved performance may be attributed to the opportunity students had to interact with one another and engage with real-life learning situations during field trips. In contrast, the expository teaching strategy placed students in a passive learning position where they mainly listened to the teacher and accepted information as presented. The findings agree with the studies of Egwu and Okigbo (2021), who reported that field trip instructional strategy was more effective in enhancing students' achievement in Genetics than the conventional lecture method because experiential learning improves understanding. The findings are also consistent with the studies of Ogar and Effiong (2022), as well as Ugwu (2023), whose studies produced similar results on the effectiveness of field trip teaching strategy.

The study further revealed that there was no significant difference in the academic performance of male and female students taught Biology using the field trip teaching strategy. This implies that both genders benefited equally when exposed to the same learning environment and instructional approach. The finding supports the work of Egwu and Okigbo (2021), who also found no significant gender difference in students' performance. Their findings suggest that the field trip teaching approach is gender-friendly and effective for both male and female students alike.

Similarly, the study found no significant difference between the academic performance of male and female students taught Biology using the expository teaching strategy. This indicates that gender did not influence students' performance under the expository method. The finding is in line with the study conducted by Binoyo, Akinboboye, Olalekan, Ojo, and Isa (2025), who found no significant gender differences in students' performance when using the expository teaching technique in Mathematics in Ekiti State, Nigeria.

Conclusion

Based on the findings, it is concluded that Biology students taught the concept of ecology using field trip teaching strategy performed significantly better than their counterparts taught using expository teaching strategy. There is no significant difference in academic performance between male and female students taught Biology using field trip and expository teaching strategies.

Recommendations

The following recommendations were made on the basis of the outcome of this study:

1. The study recommended that the Nigerian Educational Research and Development Council should review the Biology curriculum to incorporate field-trip teaching strategies at all levels of secondary school education.
2. It also recommended that government and non-government organizations provide training for Biology teachers on the effective use of field-trip teaching strategies to improve students' retention and academic performance.
3. Lastly, public and private secondary school managements should organize workshops to equip teachers with the necessary skills for applying field-trip strategies, thereby reducing students' failure rates in external examinations.

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