

CHAPTER 14

PROBLEMS AND PROSPECTS OF TEACHING BIOLOGY IN NIGERIA

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Introduction

There are many factors confronting or militating against effective teaching of biology in Nigerian schools. These factors are referred to as problems. Some of the problems, as identified by Akindutire & Ekundayo (2012) are absence of education professional academy, low wages, bad motivation, and poor welfare; lack of professional and in-service training, unwanted government intervention, poor budgetary allocation to teaching, and porous entry qualification.

The problems vary and could be broadly classified, based on the written materials and biology curriculum, equipment and facilities, administrative and organizational problems, teachers' characteristics as well as students' characteristics related problems.

Written Materials and Biology Curriculum

Skills that teachers require for effective transfer of ideas, through teaching and how those instructions are organized and packaged for students reading and understanding, is often a problem. Having the required ability to teach what is known and being able to write a good material is a crucial aspect of transmitting information. Writing these materials requires teachers' innovations. Teachers must be innovative to incorporate into writing materials, those instances, or experiences peculiar to the learners. These will enable students to make meaning out of what is learnt and as such minimizes problems, which emanate from lack of the required skills, in terms of written materials.

The content of the Nigerian curriculum, which is usually decided by the Federal and State governments, most of the time, does not cater for changes in the society as well as new developments in the disciplines of study. Catering for students' needs as far as curriculum is concerned, is of paramount importance, because it bridges the gap between the training received while in school and the changing environment of the learners.

All these are the factors that can motivate and encourage effective teaching by the teachers if provided. However, their absence can adversely affect the moral, frustrate, or prevent teachers from being effective. The consequence of this may be teaching anyhow, without considering whether meaningful learning has taken place.

Problems of Equipment and Facilities for Teaching Biology

These problems emanated from government inadequacy of different kinds. The problem might be due to economic crises, such as decline in government allocation. The decline in government allocation subsequently affects non-release of grants, textbooks would not be provided and journals would not be subscribed to. Others include non-provision or inadequate library and laboratory facilities, which could also result from non-release of grants. These inadequacies hinder effective implementation of the curriculum contents, thereby preventing meaningful learning by the students. This problem, probably, drove state governments into the establishment of science schools to reduce the number of secondary schools they would need to provide equipment and other facilities.

Administrative and Organizational Problems in Teaching Biology

These are inadequacies of the school that can affect students' performance in one way, or the other. They include inadequate classrooms, lack, or inadequate social amenities, such as electricity, water supply, health-care facilities, substandard food supply to boarding schools, among others. Others include low wages, poor motivation and welfare, weak admission policy and other managerial problems. All these could result from non-supply by government in case of public schools, embezzlement of money by the members of school management, or lack of maintenance culture by the staff and students of the schools. All these could affect effective implementation by the teacher and, in the end, constitute a problem of teaching.

These factors greatly influence effective learning by the students and, if not controlled, can lead to riot or other managerial problems in the schools. Other problems that can arise from administrative and organizational problems include destruction of school properties, jumping out of the school fence to socialize with people outside the school. Boycott of lessons, hooliganism, drug addiction, cultism, and other juvenile delinquencies typical of adolescence.

Teacher-Characteristics Related Problems and Biology Teaching

Teachers are faced with a number of challenges and these could negatively affect effective implementation of the curriculum, as such, it could constitute a problem. Some of the challenges faced by teachers are problem of improvisation, lack of skill or required training on the teaching profession, non-attendance of workshops, conferences and seminars, and so forth. Most teachers have problem of improvising suitable material for the unavailable conventional or real materials. Some prefer not to use the improvised version produced because of the poor quality.

Because of these, they result to the use of textbooks as teaching resources. When only textbooks are used, there is problem of lack of mass, hence, students might not have a mental picture, or idea of what is intended. This consequently results to misconception or absence of perfect understanding of the concepts in question.

Students-Related Problems

Many factors emanate from students themselves or their homes. Examples are truancy, lack of communicative skills, lateness to school, use of hand phone or laptop during class, daily study hour, and distracting other students in class. Others are improper guidance, family stress, socio-economic status, residential area, availability of the needed materials at home, among others. Students that do not attend school regularly or that lack communicative skills will be at a losing end, because such students may not be able to meaning out of what goes on in class.

Lack of communicative skill can also make the whole class boring and uninteresting. Teachers' inability to produce good written materials or incorporate into the materials, common occurrences around them makes the instructions meaningless, thereby resulting to poor performance. Students are not able to make meaning from uncommon experiences around them. Inability to do this might prevent meaningful understanding by the students, and at the end, result to problem of teaching. It is the duty of teachers to teach these students, by knowing them intimately and their problems, rather than focusing on teaching the subject matter of biology alone.

Prospects of Teaching Biology in Nigeria

To get the desired outcome of studying biology, there is the need to understand those factors that constitute a problem and look for ways to removing them. Some of these prospects are itemized.

- (a) It is desirable for teachers to acquaint themselves with the needed skills of effective lesson delivery. Teachers are expected to be aware of changes in the society and curriculum and strategies on the way forward to meet the needs of the students. Teachers, in addition, must make their written materials detailed and comprehensible to reveal the interrelatedness among the concepts.
- (b) There should be continuous support by nongovernmental organizations, philanthropists, and Parents Teachers Association. They should collaborate and assist the government in providing facilities for schools as a means of improving students' performance in various subjects. It is apparent to nearly every stakeholder that government alone can no longer shoulder the responsibility of funding education.
- (c) Government and school proprietorship of public and private schools should continue to make necessary provision for quality feeding, habitable hostel accommodation for students in boarding schools, strict monitoring of students within the school premises, supply of water and electricity, basic health facilities and functional first aid boxes, among others. Provision of these would improve the general tone of the school, which is a good measure of the school's status.
- (d) Teacher motivation, such as payment of good salary, sponsorship for seminar, workshops, or further study are good incentives to teachers, which could motivate them to deliver their lessons effectively and, at the end, improve the overall students' performance.
- (e) Teachers should acquaint themselves with the needed skills of teaching, continuing professional development; extra effort should be made to sponsor themselves for further studies as well as seminars, workshops, and conference attendance to update their knowledge on the needs of students and the changing society.
- (f) It is desirable for students to be more committed to their studies; attend school regularly and promptly, they should improve on their communicative skills to bridge the gap between what the teacher teaches and what the students learn. Parents should also be encouraged to assist in providing the students with the needed school materials and facilities in addition to not stressing the students too much on house chores and providing them with the needed guidance in their education and life, generally. Students should be encouraged to study and learn things by themselves as only students can construct their own knowledge for proper understanding to take place. Teachers and parents can only facilitate this process.

Conclusion

This chapter sensitizes teachers to various obstacles that could prevent smooth interaction between teachers and students. Having adequate knowledge of these problems might enable teachers to strategize on how to alleviate, or remove these obstacles at the end assisting them to learn. The chapter also recommends ways of solving the identified problems through continuous training and development.

Revision Questions

1. Describe how the following could constitute a problem in a school system:
 - (a) administrative and organizational practices
 - (b) written materials and biology curriculum
 - (c) equipment and facilities
 - (d) students-related problems
 - (e) teachers' characteristics
2. Discuss the managerial strategies for the identified problems.
3. Explain the differences between teacher-related problems and administrative and organizational practices.
4. In a tabular form, itemize five instances each for students' and written materials-related problems.

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