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**EMPLOYMENT OPPORTUNITIES THROUGH THE ACQUISITION  
OF THE NCE CERTIFICATE IN BIOLOGY EDUCATION:  
PROSPECTS AND PROBLEMS**

**BY**

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**ABSTRACT**

*The acquisition of academic certificate without gainfully employed is a serious deviation from the life goals and ambitions of any recipient of formal Education seeking to identify course contents and career opportunities, which the NCE holders could conveniently venture into apart from teaching. It is observed that the NCE course content on Biology Education is loaded with potentials that rare capable of equipping the NCE with the right aptitudes for both self and corporate employment opportunities.*

**INTRODUCTION**

Rapid increase in the number of schools as well as in students' enrolment were the twin problems on the Universal Primary Education (UPE) Scheme of 1976). Under its implementation, mass literacy of the populace was its principal focus, not minding whether its products has any opportunity for skills acquisition or not. However, this deficiency of the UPE was complemented with the 6-3-3-4 system, which sought to equip learners with basic scientific, technological and vocational skills so that the orientation towards total dependence on white collar jobs might be changed for self reliance. Notably the anticipation for a dramatic change after receiving instructions under these system was stalled due to certain difficulties. For instance, Olaitan, (1991), in Dansarai, (1998), cites that the

curriculum did not provide enough activities for students to practically demonstrate, rather emphasis dwelt on 'showing', 'telling' and on observing demonstrations. It was also noted that a great disparity existed in the supply and availability of relevant equipment and qualified personnel to urban and rural schools.

Be that as may, the Federal Government of Nigeria is well focused in its resolve to make science, technology and vocational education the veritable tolls for skills acquisition that would enhance the Gross Domestic product, export promotion, self reliance and reduction in the unemployment rate of the country. This informs the establishment of supervisory agencies for the various tiers of tertiary education in Nigeria (NUC for Universities, UBTE for Polytechnics and NCCE for Colleges of Education) to ensure that academic standards are not compromised. However, enrolment into Colleges of Education has continued to decline. Partly responsible for this is the belief that the NCE merely provided its holders with the certificate to teach, a non-viable vocation. The dismissal conditions under which teachers perform their work such as poorly furnished offices (where available), irregular salaries and general poor remuneration (Ukpene, 1977, Fagbemi, 1998) give credence to this belief.

From the observation of Akabi, (1998), science education has several gains, among which includes, to

- i. develop the powers of positive thinking
  - ii. generally emancipate the citizens from squalor by raising their standard of living through provision of employment opportunities
- part from training to be teachers, the learners of biology education among others, should be able to:
- i. view biology as a process of enquiring into the living world
  - ii. develop in students the ability to use biological process and principles to solve social problems;
  - iii. apply concept and methods concepts and methods acquired in the course in new area to study and in everyday situations'
  - iv. critically analyze the activities of living things in their environment;
  - v. include positive scientific attitudes and values in the society and promote positive disposition towards science and the scientific world.
- NCCE Minimum Standard for NCE (Science Education) 1996.

From the components of the minimum standard cited above, it presupposes that the biology education syllabus makes provision for

diversifying the job potentials of learner in Colleges of Education.

## PROSPECTS OF VIABLE EMPLOYMENT WITH THE BIOLOGY- EDUCATION NCE CERTIFICATE

Biology is a field of study with abundant opportunities for self development, provided the learners are well prepared and groomed in the field. However, how well the learner internalize these opportunities depends on the competence of their teachers and an enabling environment. The NCE graduate of biology education has their potential of going into full scale self-employment or could decide to go for corporate employment of he/she so desires.

### SELF - EMPLOYMENT OPPORTUNITIES

#### I. CROP PROTECTION

The products of NCE biology education programmes could avail themselves of opportunities which abound in the agrarian enterprises within their localities. Most Nigeria resources - poor farmers hardly understand elements of pest management techniques apart from the application of chemical which often have obvious deleterious environmental consequences (kpene, 1998). Course on the diversity of lower plants here the candidate study various aspects of pathogenic organisms such as viruses, bacteria, fungi, as well as the diversity of invertebrates that deals with protozoan, and platyhelminthes (a group of intestinal worm) will enable them to set up consultancy services on crop protection where incidences of plant and animal pests are manages and maintained below the damage threshold. Courses on 'Organisms and environment; as well as on 'Genetics' could expose learners to components of host plant resistance and biological of pest which are both import tenets of integrated Pest Management (IPM)

#### ii. ENVIRONMENT PROTECTION

Cases of improperly disposed waste originating from "pure water bags", papers and other forms of refuse little the surrounding of most homes and gutters of several Nigeria cities. Market generated waste sometimes from mounds of stench - producing heaps along roads to

major markets in cities. Applied biology courses exposed learners to environment elements which could predispose man to spread to certain disease pathogens. Together with 'cell biology' learners learn the destructive consequence of such pathogens to body and organs. The NCE biology education equips the learners with aptitudes with which they can establish small scale refuse collection disposal outfits for individual homes and offices for a fee. At this level it is not capital intensive to establish but very rewarding from certain kinds of pollution and also disposes of breeding sites for pathogens.

### iii. **FLORAL GARDENING (HORTICULTURE)**

In these days of improves living standard, the beauty of houses and homes are being complemented by copious planting of flowers around them. Understanding the soil structure, nutrient elements and roles in plant metabolism, diversity of higher plants, and some aspects of biotechnology substantially equips the learners with basic knowledge of cultivating flowers of various designs and colours for sale. If properly managed the individual could contacts to plant, supply and maintain the flowers in company premises or for government owned institutions from which substantial revenue can be generated.

## IV. **ANIMAL BREEDING**

The NCE in biology education could conveniently decide to engage in the breeding of animal for scale to the public. A beginner could go into the breeding of rabbits which is highly cost effective with high rate of fecundity. Fish and poultry breeding although highly rewarding financially bit capital intensive, could be embarked upon if the candidate could raise soft loans from banks, co-operative societies or from philanthropists.

### v. **TEACHING**

Another lucrative enterprise the biology educationist can venture into is to organize private teaching for JAMB, SSCE and related examinations. This experience is highly rewarding and ensures a steady source of income. It is very cheap to begin and manage.

## **CORPORATE EMPLOYMENT**

Apart from going into self-employment the service of biology education NCE graduates could be gainfully utilized in the following fields

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of human endeavours.

### i. RESEARCH INSTITUTES

The study of biometry enables the students to acquire basic skills in experimentation and research designs. Genetics exposed them to rudimentary concepts of plant and animal breeding, gene transmission as well as elements of biotechnology. With little industrial training, holders of NCE certificate in biology would easily adapt to the various aspects of operations that are obtainable in research institutes.

### ii. DEMOCRACY AND POPULATION RESEARCH

From ecology II, students learn the basic tenets of population studies methods of assessing the sizes of populations, factors affecting sizes of population as well as population growth and population growth curves. This makes the services of an NCE holder in biology crucial to the operation of the National Population Commission and the National Identity Card Scheme respectively.

### III. ENVIRONMENTAL PROTECTION AGENCY

The environmental protection agencies at both the state and Federal Government level in the country can employ NCE holders in biology as field trainee. With their skills from biometry and cell biology, the environmental protection agencies would be effectively to ensure a pollution - free environment.

## PROBLEMS FACING THE TEACHER TRAINERS AND TRAINEE IN BIOLOGY

According to Iheigbulem (1997), student' attainment of instructional objectives in science. Technology and mathematics education depends to a large extent on the teacher' proficiency in doing their work. The conditions under which teacher trainees study are devoid of basic material resources. In most College of Education, the biology lecturer is faced with the dearth of inadequate teaching facilities. Some laboratories are stocked with obsolete equipment and reagents while consumables are inconsistently provided.

Worst still is the monthly subvention being given to College which provide a guise for some administrators to feign lack of money to but basic learning materials.

Some biology lecturers lack qualified support personnel such as laboratory technologists and technicians to guide students practical. In such cases the lectures combine their work with those of other personnel which leaves them with little time for research activities. Shortage of funds for science education hinders the provision of in-class and out-of-the-class learning experiences such as field-trip and excursions.

The poor social rating of teachers at whatever level has seriously influence the choice of prospective candidates seeking placement into tertiary education. For instance, Ukpene (2001 a) and Ukpene (2001 b) observed that female students in Kano state shun enrolment into science education courses because they do not provide immediate financial rewards to they attract the 'right' societal acclaim.

## **SUGGESTIONS**

For the proper training of students for the appropriate of the right vocational skills, the following suggestions are made; thus:

- i. Teachers should carefully select, prepared and effectively utilize instructional materials to provide opportunities for critical thinking and objectivity because of the lasting impression they make on the learners (Balogun, 1997) .
- ii. The Government should continue in its efforts to assist in the provision of complexes and learning materials. Its effort in assisting Colleges through the PTF and ETF is highly commendable. However, Government should reconsider its monthly allocation of subvention to institution do theta effective planning programmes could be done.
- iii. Science Education should be given special grant in every overhead allocation that is given to the colleges.
- iv. NCE graduates should try out their hands on activities to generate personal revenue for self-sustenance.
- v. The various tiers of Government should create avenues for giving soft loans without collaterals securities to NCE graduated to enable them go into self-employment.

## CONCLUSION

The persistent unemployment situation in the country has been blamed on school leavers for its persistence by not taking to self-employment (Bulus, 1998). However, it is difficult to venture into any financial endeavour without capital and without having acquired the proper skills while in school. Therefore all practitioners in the college system should provide the enabling environment for learners to acquire proper skills for development during their vocational and technical education to enhance self-employment opportunities.

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