



BIOLOGICAL GARDEN AND ENTERPRENUERSHIP PROGRAMME AN AVENUE FOR SUSTAINABLE EDUCATIONAL DEVELOPMENT IN NIGERIA

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ABSTRACT

The fall in government paid employment desires that a reasonable amount of entrepreneurial education components be evolved and introduced for recipients of education at all levels of education in Nigeria. The paper focuses on the usage and application of acquired skills, mental ability and creativity as the attribute needed for successful entrepreneurial programme. Therefore to address the problem of redundancy, unemployment, and poverty and promote sustainable development the paper discussed the usage of biological garden, in which production, rearing and cultivation of areas like fishery, rabbi try, genetic breeding and growth of orchard etc, where used as panacea to the anemic syndrome.

INTRODUCTION

As a result of poverty the quality of life is low, with endemic diseases like malaria, river blindness etc. so also are cases of infant and maternal mortality. These clearly portray a level of insecure economy and non-productivity of the citizens. This agrees with the notion of Oranu in Abubakar (1999) who noted that Nigeria as a nation is faced with insecure economy, problems of simultaneous inflation and recession, as well as significant unemployment of both the youth and the adults. This unsatisfactory state of the nation's economy calls for a review of our policies, especially human resource development, as the economy does not promise employment opportunities for its citizens. Therefore, the curricula of science education need to be modified to be able to provide students with basic entrepreneurial skills necessary for self-employment.

Basically the government and the private sectors have a lot to contribute in creating jobs and enabling environment for poverty alleviation, the education sector can also make some input. The school therefore needs to be made more attractive and productive to students, so that they can proudly identify with the schools and be willing to build same up, even after they have left school. These thrust when achieved will both directly or indirectly up lift the society in various dimensions.

EDUCATIONAL ATTAINMENT AND ENTREPRENEURSHIP PROGRAMME

Entrepreneurship can be defined as the art of identifying a business opportunity, planning for it and getting it going. Nafziger (1977), stated that entrepreneurship is productive resources which coordinates and organizes other resources for (capital and man power) economic development. It is difficult to venture into any financial endeavour without capital and without having acquired the proper skills of its operation. This clearly means that a person can be taught how to identify a business opportunity, plan it, organize it and manage it. Abubakar, (1999) stated that it will be a disservice to the students if their acquired skills and knowledge cannot provide them with employment. More so, it will be a great loss to the society if her skilled work force is not contributing to her economic and industrial development. If education is to be meaningful it is ought to be organized around the proven needs of the nation, society and the individual. Some of the essential roles of vocational education according to Burleigh (1988), is to,

- i. Develop and maintain a skilled labour force sufficient to ensure the production of an abundance, of good quality domestic goods and services at reasonable cost.
- ii. To provide an individual with techniques, competences and knowledge which are saleable in the labour market.

Educational activities are made to transmit and preserve the cultural heritage, sustain changes in technological advancement, promote ideological transformation and economic structure as variable means of preparing productive people who are fully integrated within the dynamic life and survival of the community (Oyekan 1997). Adding to this justification for skill acquisitions in biology, Akanbi (1996) stated that science education has several gains among which include 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.

JUSTIFICATION FOR SKILLS ACQUISITION IN BIOLOGY TOWARD ENSURING A SUCCESSFUL ENTREPRENEURIAL PROGRAMME

Biology is field of study with abundant opportunities of self-employment, provided the learners are well prepared and groomed in the field (Ukpene, 2001). The preparation of these learners comes through the translation of basic theoretical concept into organized practical. Obviously the role of practical work in developing psychomotor or manipulative skills as well as enhancing better understanding of products and processes in science cannot be over emphasized; for the practical nature of a subject is commonly regarded as important sources of learners' motivation – (Bryce and Robertson, 1983). It is through the provision of these practical that required skills which are relevant and compatible with developmental needs of the country as well as addressing some national priorities will be harnessed. It will also serve as a training ground for small scale industry which has the following specific objectives (NDE, 1989).

- i. To develop a pool of potential entrepreneurs who are well equipped to start and successfully manage the small and medium scale industries.
- ii. Encouraging self-employment as a conscious and predetermined choice.

- iii. Generating of employment opportunities for others.
- iv. Reduction of dependent on Government and large firms for salaried employment.

It is not possible for the old educational system to produced graduates with practical skills, because it was considered bookish and emphasized the acquisition of white color jobs. But the new system of education was adopted because; it provided vocational skills and emphasized self-reliance as indicated in the national policy on education. This correspondently, will lead to poverty eradication, and self-actualization. (Ibrahim, 2005).

CONCEPTUALIZE BASIS OF USING BIOLOGICAL GARDEN AS A PANACEA FOR TRAINING ENTREPRENEURIAL PROGRAMME IN SCHOOLS

Inquiry and observations are process that will encourage students to develops ideas and solve problems in a logical and systematic manner. One of the methods of imparting desirable knowledge involving skill acquisition and a total change of self-dependence from an early age of growth is through the use of biological garden. The basis of this statement is the fact that the garden if well planned and established will effect sound biological education, in which the learners will learn how to behave like scientist, observe, record, experiment, deduct, and express relationships and infer logical conclusions. In setting up a biological garden the teacher should select a suitable site which should be as close as possible to the biology laboratory. The propose garden should be properly and structurally mapped out, to contain life forms that will occupy respective spaces. The following sections are suggested.

1. Water Reservoir
2. Beds for Plant Specimens
3. Pond (Artificial or Natural)
4. Animal House
5. Site for Genetic Breeding of Plants.
6. Growth of Orchard.
7. Special life Forms/vegetables

1. Water Reservoir: - Water is the source of life; its presence is the basis of a lively garden. The sources of getting water are tap, borehole, well or naturally occurring pond. The water is to be used for both watering, feeding and as habitat to life forms.

2. Beds for plant Specimens (Floral gardening and nursery)

These are plants that are raised and grown for ornamental, medicinal, research and other purposes. In these days of improved living standard, the beauty of houses and homes are being complemented by copious planting of flowers around them. Using this section of the garden the students can be taught knowledge of cultivation of different species of plants, and flowers of various designs and colors. This area will also be used to raise rare species which are either seasonal or difficult to obtain. These could equally be sources of revenue to the school.

3. **Pond (fishery site):** Fisheries is now globally seen and recognized as an avenue which is highly rewarding, easy to maintain but capital intensive. The elements of fisheries can practically be carried out, in which pond can be constructed by digging a suitable portion. The floor and sizes of the pond should be cemented. It is advisable to have outlet for excess or contaminated water without allowing the biotic component to escape. Equipping the learners with the managerial skills will help them to appreciate its suitability for self dependence before or after graduation.
4. **Animal House:** - Here small animals that are needed for people's consumption are reared. Animals like rabbits that are highly cost effective and with high fecundity rate can be introduced. This will instill in the students, an idea of managerial skills of rearing for both commercial and practical purposes.
5. **An Area For Genetic Breeding Of Plants:-** Theoretical knowledge of genetics has shown its relevance in improving food production. This concept can be practically demonstrated in the garden, especially through grafting. To do this cut surfaces of two different plants of the same or similar plants are collected so that the growing tissues of both plants come into contact, and both grow to form a good plant. For example, a sweet orange can be grafted onto a sour orange. The tree will therefore show the characteristics of sweet orange and obtain its healthiness from the sour orange. (Komolafe, 1977). This method can be applied on varieties of fruits, for home and commercial consumption.
6. **Site for growth of Orchard:-** This is an area designated for the cultivation growth, and maintenance of different species of fruits, in this particular section students will be taught skills of Seed selection, nursing, bed preparation spacing and harvesting est. Fruits are needed on daily basis for nutritional requirement of the body, so their growth will yield high revenue to the owner. Therefore the idea of having it in the garden is a good foresight and highly rewarding.
7. **Special life forms/modified plants.**
In this particular area, the teacher may rear and grow plants that can be used for specific purposes such as garlic, onions, ginger, which are economically viable for domestic usage .Seedlings of other plants that are needed for averting calamities such as desert encroachment, can also be planted example like neem trees, eucalyptus etc. Cactus can be planted as boarder in some areas of the garden.

CONCLUSION

Education is a cumulative activity that promotes economic well-being of the child and prosperity of the country. It is also a weapon which will enhance effective poverty eradication among citizens. This paper has stressed the relevance of a neglected aspect of biology (the biological garden) in equipping and streamlining the learners towards learning some basic concepts of becoming self-sustainable and useful to self and the general public.

RECOMMENDATIONS

1. Biology curriculum should be the type that will enhance the adaptation of the learner to the changing word of skillful, scientific and technological betterment that will enable him to function properly within his limited capacity.
2. The education that children should acquire, according to pat (2007) should be community centered that promote local enterprises development as well as industry through factoring into education as well as leveraging the resources of the school in

making available community services, in areas such as increasing in food production, afforestation, draught control, sanitation educational technology development etc. To emphasize the dignity of labour, more attention should be given to entrepreneur curriculum, which will help in achieving the stated goals of national policy on education.

- 3 Schools that offer biological sciences should be compelled to set up biological garden so as to gear their product towards learning practical concept of entrepreneurship for poverty eradication.
- 4 Teachers should endeavour to attend regular workshops and conferences so as to understand and appreciate the concept of managing natural resources, pollution, desert control and modeling of ideas into practical forms.

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