

The Role of Inquiry Teaching in Promoting Entrepreneurship at the Primary and Secondary School Levels in Nigeria

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ABSTRACT In this day and age when there are inadequate white collar jobs to satisfy the teeming population of graduates at various levels in the country, training to become an entrepreneur is one of the ways the government has employed in tackling the problem of unemployment. This paper therefore highlights the fact that entrepreneurship should not be limited to the tertiary institutions but rather from the primary and secondary schools through the inquiry method. It highlights the inquiry teaching method and showed the relationship between entrepreneurship and inquiry. This means that if the inquiry method is used in teaching science and even some other subjects, introducing entrepreneurship teaching will not be difficult and it will be well taken by the students. The paper concludes by suggesting ways in which the government may encourage teachers to facilitate the teaching of students using the inquiry method.

INTRODUCTION

The issue of unemployment has been of utmost concern to the Nigerian government for many years now. This problem is not only prevalent among the youth but also among the older generations. The Nigerian government realizing the negative impact this is having on the society has set up bodies to look into how to tackle the problem. Some of the efforts made by government include setting up bodies such as the Bureau of Unemployment which assists to train graduates on any trade of their choice after the National Youth service instead of looking for white collar jobs, which are actually not available since the 1980s. In 1999, the Federal Government of Nigeria set up a body for poverty alleviation called National Poverty Alleviation and Eradication Program (NAPEP) to reduce the level of poverty and provide a means of livelihood for the less privileged Nigerians. Between 2004 and 2007, the wife of the then Kaduna State governor Mrs Ahmed Markarfi made efforts to get many Koranic pupils (*almajiris*) idling on the streets of Kaduna metropolis into engaging in profitable ventures rather than begging for alms. This she accomplished by building a training centre and getting them trained in different professions of their choice and ultimately equipping them with working instruments for their trained

profession. This sort of gesture has gone a long way in reducing street begging, crimes and other untoward behaviors in the society. Similarly, the Bureau of Unemployment in Abuja trained people in various professions and gave out soft loans and equipment for them to start off their trade thus deterring some of the youths who would have probably been involved in armed robbery or other crimes.

The issue of pensioners/retirees is another case in point. Some of the government workers are often very reluctant to retire when due. This is because gratuities payment are unduly delayed and sometimes the monthly pensions of most pensioners are grossly inadequate for their well-being and support for their families. Consequently, they either fraudulently change their age or begin to lobby for contract appointments after retirement instead of allowing fresh employees to come into government service. Some who cannot do either retire and languish at home waiting for gratuity and pension which may be delayed or may never be paid in their life time. All these problems emanated from the orientation obtained through our educational systems. What the society requires is the type of education that will help you discover and develop your talent and use this talent effectively for your own development and progress. This can be effectively achieved by using the inquiry teaching

method in teaching every schools' subject right from the primary/elementary schools when the child is still in the concrete operations stage.

The proponent of the Universal Basic Education (UBE) realized this as a missing component in our educational system and thus proposed that inquiry teaching method should be used in teaching from primary through to the secondary school. This will ultimately allow the individual child discover his/her ability and talents in a particular profession and then imbibing the spirit of independence which is the precursor of entrepreneurship. The purpose of this paper is to elucidate the relationships between inquiry teaching and entrepreneurship, and to justify the use of inquiry teaching in the primary and secondary schools.

WHAT IS INQUIRY?

Inquiry is the art of questioning, exploring and experimenting which is the process of science. It involves development of skills such as:

- Acquisition of skills: such as, listening, observing, searching, asking, investigating, gathering of data, researching, etc.
- Organizational skills: such as, recording, comparing, contrasting, classifying, organizing, etc.
- Creative skills: such as planning ahead, designing, inventing and synthesizing, etc.
- Manipulative skills: such as, using an instrument, demonstration, experimentation, repair, construction, calibration, etc.
- Communicative skills: such as, asking questions, discussion, explanation, reporting, writing, criticism, graphing and teaching (Sund and Trowbridge 1967).

The inquiry method is designed to teach the students certain basic skills which are supposed to help them learn science, the way the scientists work and also to master the skills listed above (Pittaway 2009). Mastering these skills from primary and secondary school levels will help students to imbibe the spirit of inquiry which encourages them to be independent-minded at an early stage in life. Independent mindedness is a prerequisite for becoming an entrepreneur.

The school laboratory is a facility for teaching science. There are two types of laboratories, the indoor and the outdoor types. The indoor type is a room or building where scientific work and research is carried out. It is usually equipped with

gas, water and electricity among other things. While the outdoor laboratory is an open space mapped out for scientific activities. It could be a mechanic workshop, green house, a quadrangle for ecological studies, etc. (Sund and Trowbridge 1967). Thus, the laboratory is where inquiry is taking place and this should form part of the school establishment.

WHAT IS ENTREPRENEURSHIP?

Entrepreneurship is the art of becoming an entrepreneur. An entrepreneur is a person who habitually creates, and innovates to build something of recognized value around perceived opportunities (NBTE 2007). The key words are 'entrepreneur' which connotes an individual; 'person' emphasizes personality rather than a system; 'habitually' just cannot stop being creative or an entrepreneur; 'creates'- starts from the scratch and brings into being something that was not there ; 'innovates' – able to overcome obstacle that would stop most people , turns problems into opportunities and sees ideas through to its final application; 'build something' – describes the output of the creation and innovation process; 'perceived opportunities'- sporting the opportunity to exploit an idea that may or may not be original to the entrepreneur, seeing something others miss or only see in retrospect. All the above listed key words are actually what happen in the inquiry process. The emphasis in this paper is that teachers at both primary and secondary school levels should truly practice inquiry teaching. The government and other proponent of education on the other hand should endeavor to provide the resources, particularly in the science laboratories for teaching science by the inquiry method.

RELATIONSHIP BETWEEN INQUIRY AND ENTREPRENEURSHIP

In the inquiry classroom, the students need to be able to question, investigate, observe and construct reasonable explanations, share information, and thus develop the scientific attitude. These attitude include being able to apply knowledge and communicate effectively, be analytical, critical thinkers, must be curious, inquisitive and imaginative. He must be a self-confident, motivated learner, creative and ethical leader. His education must be liberal type, which

is beyond science. These attributes of a good student of inquiry if properly mastered will make a good entrepreneur. According to Suchman (1960), the inquiry method is designed to train the fifth and sixth graders in the skills and methods that are necessary to make a systematic study of the physical world. The pupil learns that when he observes a phenomenon which he does not understand, he need not throw his hands in despair or ask someone to explain it. He learns to gather data, experiment, formulate and test hypotheses to breakdown confusing tangle of objects and events into variables that can be examined in relation to each other. He learns to look beyond the events that are readily observable and to isolate important but elusive conditions.

Novak (1963) said that "it is essential students do something more than listen to lectures, look at demonstration experiment, study textbook, recite a lesson. The student simply must do something on their own with their own minds and their own hands. They must have a scientific experience even if it is as simple as swinging a pendulum with their pulse. He, therefore, recommended laboratories that can run the spectrum from text-centered to the self – energized laboratory which is completely student-centered and student activated."

This type of teaching approach will help the student to understand the problem on ground and the operations of a scientist. He or she will learn to use various instruments; he/she becomes aware of the amount of routine in the quest for knowledge. He is frequently exposed to failure but occasionally he feels the excitement of discovery.

In inquiry teaching the student learn by doing. There is less emphasis on teacher demonstrations and more emphasis on pupil experimentation and problem- solving activities. They engage in doing project work being done by students for science fairs, etc. They engage in science processes like observation, classifying, formulating hypothesis, experimenting and conclusion.

Similarly in entrepreneurship training, the trainee after due observation, thinks about what to do. He/she tries it (experiments) in the form of small scale business and then takes a decision (concluding). The child can take a decision whether to continue or stop the business depending on the experience.

This is what entrepreneurship training is all about. Trainees learn about enterprise but also

through enterprise. One way of implementing the latter is by encouraging and assisting trainees to set up micro and small businesses operated from their educational or training institution. The materials, although intended to be used by trainee-centre which means that trainers are involved throughout the process and the responsibility for learning moves from the trainer to trainees.

This approach to teaching entrepreneurship is similar to that of inquiry teaching. Using inquiry teaching at the primary and secondary school levels will indirectly help the child to discover him/herself. He/she will learn to be capable of independent work, discover his/her talent and learn to be productive at an early stage in life.

IMPLICATION TO THE EDUCATIONAL SYSTEM

The implications of this to our educational system are as follows:

Primary and secondary school teachers should do everything within their powers to use the inquiry method during classroom instruction. They should practice it in earnest by improvising, where the real equipment is not available.

The government knowing the evil effects of idleness in youth can have on the society should wake up to her responsibility of ridding the nation of hoodlums by using our natural resources to build well-equipped indoor and outdoor laboratories, where children can really do science by inquiry.

Developing an inquiry mind will enable the student to develop the type of independent mind that he/she requires to be an entrepreneur in future since the child will be able to take decisions easily.

Before a child who has been taught through inquiry teaching reaches retirement age, he would have developed a trade which he will fall back on whenever he/she retires from government service. Retirement will then become a pleasant thing to look forward to and not a thing to be dreaded.

The classroom environment should be made conducive for learning by making available appropriate tables and chairs for pupils, there should be appropriate textbooks, workbooks, writing materials, etc. As a matter of fact, report of the survey of observation of schools conducted between 1991/1992 by Situation and Policy Analysis (SAPA) by Olajide (2002) showed that the prevailing general school external learning en-

vironment did not promote quality teaching and learning. It was observed that 77% of the children observed had no textbooks, 33% lacked writing materials, 38% of the observed classrooms lacked ceiling, in 47% of the sampled schools furniture was grossly inadequate for pupils' use. Pupils sat on building blocks, or were cramped together on long benches without desks. Overcrowded classroom left no room for the teacher to circulate among pupils and discouraged both class work and homework.

So far there has been little or no improvement in the above situation in public schools. Many parents who can afford it would rather take their children to private schools. It is, therefore, imperative for the government to rise in earnest and address the issue of creating conducive environment for learning the inquiry way. This can be done not only through making the above resources available but also through building and equipping the laboratories both in the primary and secondary school levels.

CONCLUSION

In conclusion, teaching by inquiry which has been an age long practice in science if properly used can help to develop the mind and bring out one's talent and ability at a very early age. If the government is really serious about developing entrepreneurship in our children, then it should do everything in its power to encourage teachers to teach science using the inquiry method. This can be done by proper remuneration of teachers, building and equipping the laboratories in both primary and secondary schools.

The teachers on their own part should do all they can to instill the inquiry system into the minds of the students by making good use of both indoor and outdoor laboratories. In addition, the teacher should learn to improvise when the actual equipment is not available. By so doing the children would develop an inquiry mind and learn to be responsible citizens from a tender age and, thus develop healthy minds. Thus even in our science class, Nigeria can be rebranded in the minds of our children as 'Nigeria: A Great People, A Great Nation.' This is a way educators can make a contribution to the development of the country.

REFERENCES

- National Board for Technical Education (NBTE) 2007. Entrepreneurship Education for Polytechnic and Monotechnics in Nigeria. *Teacher's Guide*. Submitted by Hamitle Consult Nigeria Ltd. Dec. 2007, for NBTE Kaduna, Entrepreneurship Education, pp. 96-97.
- Novak A 1963. Scientific inquiry in the laboratory. *The American Biology Teacher*, 25(5): 342-346.
- Olajide JO 2002. The Degraded Classroom Learning Environment: A Wait-Time Solution. *Proceeding of the First National Conference of the Nigerian Society for Environmental Health Now Society for Occupational Safety and Environmental Health*, 12th -15th November 2002, pp. 152-156.
- Pittaway L 2009. The role of inquiry- based learning in entrepreneurship education. *Industry and Higher Education*, 23(3): 153-162.
- Suchman R 1960. *Inquiring Training: An Approach to Problem Solving Laboratories in the Classroom*. New York: Science Material Centre.
- Sund RB, Trowbridge LW 1967. *Teaching Science by Inquiry in the Secondary School*. Columbus, Ohio: Charles E- Merrill Publishing Company, A Bell and Howell Company.