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### **INTRODUCTION**

Education has universally been appreciated as an instrument for effecting national development. For such reasons great nations of the world do not toy with it. Little wonder why the British Prime Minister, Tony Blair on assumption of office gave as his main policy thrust, "Education, Education and Education". It is worth noting that it is not just "universal schooling" (a mass exposure to Western education) that can bring national development. An education system that is capable of impacting on the nation has to be a qualitative one. The government of Nigeria appreciates the role education can play in its wholesome development. opening statement of the National Policy on Education, it is clearly stated that "for the benefits of all citizens, the country's educational goals shall be clearly set out in terms of their relevance to the needs of the individuals and those of the society, in consonance with the realities of our environment and the modern world (FGN, 2004: 4). It is the search for a relevant curriculum that has been instrumental to the frequent revision of the National Policy on Education.

### WHAT ARE THE NATIONAL EDUCATION GOALS TO BE ATTAINED?

Section 1 of the National Policy on Education stipulates the National educational goals as:

- (a) the inculcation of national consciousness and national unity;
- (b) the inculcation of the right type of values and attitudes for the survival of the individual and the Nigerian society;
- (c) the training of the mind in the understanding of the world around; and
- (d) the acquisition of appropriate skills and the development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of the society, specially the goals for the various levels of education are equally spelt out, (FGN, 2004: 8).

### TEACHERS' ROLE IN THE ATTAINMENT OF EDUCATIONAL GOALS

The trend in teaching and learning process is to make the teaching and learning events as interesting as possible. To generate learners' interest, encourage creativity and full class participation in all teaching and learning sessions, learning should therefore be resource-based and learners should be involved in their learning activities.

This trend has brought a paradigm shift in teachers' role. Teachers are no longer regarded as custodian of knowledge and disseminators of information. The burden of transferring knowledge to the learner has equally switched from the teacher to the myriad of resources available in the market. The teachers' prime role is to provide the learners with a wide variety of learning experiences through these resources and to nurture creative responses in them. Implications of this paradigm shift to the human learning system are that:

- the learning environment ought to be richly prepared to facilitate individualized learning among the learners;
- the learners must have easy access to a variety of pre-selected learning resources;
- the teachers must be resourceful to improvise material resources that are essential in all teaching and learning events when they are not available and or accessible;
- the teachers are intellectually equipped to source for indigenous resources that can play active roles in the transfer of knowledge and in the provision of different types of motivation to the learners.

### **NEEDS FOR INNOVATIVE PRACTICE**

(1) **Dearth of Curriculum resources:** Of all the problems that plaque education in Akwa Ibom State, the most intractable of them all is the dearth of relevant learning resources and inadequate physical facilities. Ndaji (2003) observed that education sector has remained in the quaqmire and has been on a nose dive in the past one decade in terms of quality, standards, and dearth of facilities. Two years

after Kolo (2005) gave the hall marks of the present day primary and second secondary schools as environment a with over crowded classrooms with falling ceilings, blown off roofs tops, dangerously hanging windows. In a similar description a one time honourable Ministry of Education, Dr. Ayu disclosed a strange phenomenon he observed in some Eastern states. He described how fourteen classes were held simultaneously in one open hall, with two teachers sharing one black board.

Materials resources are essential in all teaching and learning events. They do play active roles in the transfer of knowledge and in the provision of different types of motivation to the learners. Teachers need them to be more effective and the learners need them to enhance learning.

- 2. Teachers' instructional need: A competently trained teacher anywhere in the globe needs learning resources to be effective in performing his/her instructional functions. When they do use them, diverse teaching and learning approaches that would have otherwise been impossible would be introduced and learners will build confidence in themselves. In reality these resources are often not available and accessible. Such poor learning environments with increasing parents demand for better deals for their wards amidst inadequate funding by the proprietors of schools are enough indicators that teachers should seek for innovative ways of creating indigenous resources to complement curriculum materials.
- 3. Trend in Media Technology: There has been a major trend in media technology which can have a tremendous impact on the teaching and learning processes if schools were positioned to utilize them. Resource sharing and networking is another recent innovative strategy in the application of educational technology to curriculum needs. The strategy encourages rapid and direct exchange of ideas, information materials, personnel and services between the cooperating institutions. With the development of virtual reality and

library more teaching and learning resources are made available for teachers' and students' use if they are computer literate and have the enabling facilities within reach. These situations have heightened the need for teachers to be resourceful in sourcing for and utilizing available indigenous resources for the attainment of educational goals.

- 4. Indigenous Resources That Can Be Innovatively Utilized: A close search in our communities reveals that there are myriad of indigenous resources that could be skillfully utilized in instruction. Such resources include:
  - persons in the community with special knowledge or expertise,
  - shopping mails, centres and markets,
  - health institutions
  - manufacturing and banking industries
  - museums and libraries
  - botanical gardens and zoos
  - art galleries and artifacts
  - natural resources (mountains, streams canals, ponds, rocks quarry etc.)
  - science parks and fishing settlements
  - welfare institutions (juvenile court and reprimand home)
  - research institutions
  - aquatic habitats
  - historical and production sites

There is need for teachers to maximize their hidden potentials and come up with innovative practices in the use of indigenous resources. This could be achieved through improvisation, adaptation or extemporaneous approaches in the class. Such teachers are the wealth of their schools, when the required resources are not available or if what is available appears obsolete or inappropriate. They will create appropriate resources

and environment for their use. After all, teaching involves professional judgment. It calls for the trained eye to see what is actually happening, and the trained mind to decide what to do next.

# INNOVATIVE PRACTICES IN THE ADAPTATION AND IMPROVISATION OF INDIGENOUS RESOURCES

The two concepts, "adaptation", and "improvisation" are media production terms. In adaptation, a teacher changes or modifies the format of an existing material to meet his instructional needs. This could entail reprinting of an already printed material, enlargement of another so that it can be used in a different way or under a different condition. A visual could be adapted to provide both visual and audio stimuli so as to meet the users' learning needs. A fragile or rare visual could also be mounted and laminated for instructional use.

Improvisation on the other hand may be defined as the act of selecting, composing, making, or providing a substitute for something that is essential but which is not available or accessible. Improvisation is one of the instructional roles of a resourceful teacher. Improvisation also entails creating new learning situations or developing and modification of existing ones. It has to do with composing and performing without previous preparation as in extemporaneous discussion session.

## For History and Social Sciences

In the use of archeological excavations students could cooperatively learn about different cultures of Nigerians. Buried artifacts could be dug up, pooled together and identified. These artifacts could be compared with authentic items found in the museum. Art works and crafts from various communities could constitute interesting items for extemporaneous class discussion.

- **For Oral Literature:** A visit to the traditional palaces and a chat with the custodians of traditions with the students could provide the learners with rich experiences.
- For History and Arts: Visiting historical sites are very relevant to the teaching and learning of history and arts. This strategy is effective if the audience can become the actors. The learners could be assisted to explore some of the issues further with activities such as the "hot seat", or cross examination of characters. Its use could bring a period of history in a challenging and thought provoking manner thereby breathing life into the content.
- Classroom Learning Centres and Class Resource Corners for all Subjects: Lower class level could use these resources in their language development. They could enhance the creativity of the middle class level if they personally take part in the display activity. For the upper class level, the class resource corner could act as a catalyst in helping them develop the much needed reading culture. Special arrangement of seats in such environment could further add novelty to the class learning experience.
- For geography and biology: Collection of Manipulatives or Realia during a visit to natural resources like carnals, streams, ponds mountains and rocks could provide opportunities to study aquatic life, plants and animals.
- Sequencing of Picture Cards for all subjects: This entails a chronological
  arrangement of flat pictures to tell a story or give information. For
  example, the life cycle of an insect like mosquito, a production process,
  or oil extraction could all be studied using picture cards.

Eggs	Larva	Pupa	Adult
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• **Using Song Mnemonics:** Challenging topics that give learners rough time could be pleasantly learnt using song mnemonics. Eg. Mathematics is a very simple subject because it has a formula.

Vital information that the learners need to know could similarly be presented using songs e.g. songs on:

- proper way to recycle waste materials
- water and air pollution
- basic health tips
- branding
- Dentition etc.
- Games and Simulation for all Subjects: These are learning techniques used in solving various real life situational problems in the classroom. Wokocha (1992), Ekpo and Ekukinam (1998) observed that children learn through their play activities and that their play experiences serve as the primary vehicle by which they learn about themselves and their environment. A whole class could be involved in a discussion using games and simulation techniques. A game activity which may or may not entail simulation elements but instructional could motivate the learners greatly. The skills practice in such game and simulation could be an academic one or work environment skill.
- **Problem Based Learning (PBL):** Several strategies used in problem solving can be the focus of teaching/learning e.g;
  - Procedures involved in analyzing a production process,
  - Procedures involved in determining a sequence in a puzzle, and
  - Applying creativity in decision taking.

For instance, if an unidentified substance was found in a fruit juice bottle from a brewing company. Students could be asked to discuss as production manager how they could handle various complaints brought in by the customers.

- For creative writing: Relay story writing as innovative technique could be used to develop creativity in the learners. Topics for such writings could be based on their socio-economic or political background. The technique creates avenue to identify learners with potentials in literary writing. It is best handled in groups. A learner and member of a relay team starts from an imaginary story writing, stops half way but builds into the story enough promptings to guide the next writer. At the end of the specified time given, the stories are assessed for creativity and imaginative use of vocabulary.
- **Use of Multimedia:** This is a collection of teaching/learning materials involving more than one type of medium and organized around a single topic. They provide varied sensory experiences to the learner. Such kits could contain, CD ROMs, audiotapes, pictures, maps, worksheets, charts, graphs, manipulatives (realia), models, diorama etc. The use of a multi-media kit does not necessarily entail the use of expensive gadgets.

### CONCLUSION

Teaching and learning have gone beyond reading out of old notes by the teachers to a group of frightened students. These instructional events could also be boring.

There is a positive attitude towards the utilization of community resources to complement curricula resources. The modern tendency is to acquire sophisticated technology for classroom use. This is all fair if schools have the facility to use them and can provide for them. Where this is not feasible the indigenous (community) resources should be adapted for instructive use.

It is true that the use of curriculum resources will encourage full class participation and learning will be enhanced. Several teachers, Eshiet (1996) and Ekong (2004) have listed indigenous resources that could be

substituted for the teaching of science based courses. The teaching of Arts and Social Sciences seems to frequently pose a lot of challenges to some teachers. Thus the innovative practices in the adaptation, improvisation and use of the identified indigenous resources as handled in this paper is a significant contribution in using Educational Technology to address the challenges of attaining the national education goals in Nigeria.

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