Nigerian Educational Researcher

A Journal of The Nigerian Educational Research
Association (NERA)

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HARNESSING EDUCATIONAL TECHNOLOGY TOWARDS ACHIEVING QUALITATIVE PRE-PRIMARY EDUCATION IN NIGERIA

Pre-primary education has been identified as a vital foundation necessary for every Nigerian child. The objectives as stated in the National Policy on Education (1981) have also been seen to be geared towards quality in Education at this level. But what obtains in the field falls short of what is intended. This paper discusses measures especially in the area of educational technology which would bring about the desired quality to pre-primary education in Nigeria. Government active participation is needed to usher in a change in the right direction.

INTRODUCTION

More people are becoming aware of the need to start the education of their children early. More and more parents are sending their children to the pre-primary institutions unlike the situation two decades ago. Although government has taken no partisan position in the provision of pre-primary education as observed by Obinaju (1993), it shows some concern over the provision of this level of education by stipulating the aims and objectives which should guide the dispensation of education at this level. It also takes steps to approve these institutions as meeting the required standard or disallows the continuation of ailing institutions. This concern comes probably as a result of the recognition that the child at this level is at a critical period of his development, and any stimulus provided has a great impact on him for a significant segment of his life. The questions which might arise out of this awareness are:

- What should be the objectives of a qualitative pre-primary education?

Would the objectives stated in the National Policy on Education lead to qualitative pre-primary education in Nigeria? and

How best could the objectives of pre-primary education be met?

In this paper, the provision for pre-primary education are discussed. The contributions of educational technology towards better achieving the objectives of this level of education are also examined.

THE OBJECTIVES OF PRE-PRIMARY EDUCATION:

Pre-primary education is conceived in many ways. This paper only concerns itself with the type of education provided in an educational institution for children between the ages of 3 and 5 prior to their entry into the primary system of education. This type of education is borne partly on the realization that the critical period for foundation laying is before age 6 (Latham, 1977) and that institutionalising these children for some hours of the day could be a great relief on the parents who at the time would be at work. For obvious reasons, the National policy on Education (1981) stipulates the objectives of pre-primary education to include the following:

(a)   Effecting a smooth transition from home to school.
(b)   Preparing the child for the primary level of education.
(c)   Providing adequate care and supervision for the children while their parents are at work.
(d)   Inculcating social norms.
(e)   Inculcating in the child the spirit of enquiry and creativity through exploration of nature and the local environment, playing with toys, artistic and musical activities etc.

(f)   Teaching co-operative and team spirit.
(g)   Teaching the rudiments of number letters, colours, shapes, forms..
(h)   Teaching good habits especially good health habits.

Obinaju (1992) observes that at the beginning of schooling, children are seen to exhibit some form of school phobia. This phobia interferes with immediate take off of school programme. Careful management is needed to resolve such conflicts as may be observed or severe symptoms may persist. Starting school at the primary level of education sacrifices quite a substantial amount of time to this type of phobia. Symptoms which would manifest with maturity according to the age of the child would also be resistant to treatment. Pre-primary education is here seen as a worthwhile provision towards effecting a smooth transition from home to school and preparing child for the primary level of education (see objectives a and b above).

The mere fact that when children are left in the hands of experts in child development and elementary education, adequate care and supervision would be provided, is enough reason to establish pre-primary institutions. The care given by these experts in most cases supersedes the quality of care provided in many homes. Moreover, a child among other children needs to learn some social cues which would help him to survive in a group. These social cues will minimize friction and ensure his ability to live in peace even when he becomes an adult. These are provided for in d, e, f and h. The intellectual development of the child is provided for in objectives e and f. When all these are provided for, pre-primary education should be viewed as a very significant stage in human development. When it is provided in an institution, great care should be taken so as to maximize the achievement of the above objectives.

As observed, all aspects of the child's development are in the objectives for pre-primary education. The quality of pre-primary education provided would depend on the method used to fulfil the stated objectives. Here the need for educational technology, which is defined to comprise both methods and materials, arises. In fact Bell-Gam (1992: 248) defines educational technology as:

a systematic way of designing carrying out and evaluating the total
process of learning in Terms of specific objectives based on research on human
and non-human resources to bring about more effective instruction

THE CONCEPT OF EDUCATIONAL TECHNOLOGY

In Mkpa's (1992) view:

Educational technology is a system by which methods and material
can be used relevantly to support each other. It is the development,
application and evaluation of systems, techniques and aids in the field of
human learning.

In another definition, the Association of Educational Communication and Technology quoted in Ibe-Bassey (1998: 14) conceives educational technology as

a complex integrated process that involves people, ideas, devices,
procedures and organisation for analyzing problems and devising,
implementing, evaluating and managing solutions to these problems
that involve learning.

In both definitions, educational technology is seen to involve the teacher, the learner, instructional aids and the methods used so as to transmit a relevant piece of knowledge from a source to the receiver. Educational technology also provides for a feedback management procedure. The basis for educational technology is that there is a worthwhile knowledge to be transmitted, that learning is subject to adequate motivation, that human perception and other intellectual functioning are punctuated by the principles of individual differences and that there is need to assess the amount as well as the quality of material successfully transmitted. In this way, educational technology incorporates all scientific and other applications towards the fulfilment of educational objectives.

By these definitions, educational technology is conceived to comprise quite a number of technological products and processes. It is often conceived as making use of such electronic gadgets a radio, television, satellites, cable television and the like. It is also conceived to include instructional technological gadgets like films, overhead and opaque projectors and other hard and soft wares. With all these components, we shall now examine how educational technology has been utilized so far towards achieving educational objectives at the pre-primary level.

THE CURRENT STATUS OF EDUCATIONAL TECHNOLOGY IN PRE-PRIMARY EDUCATION

After defining educational technology as including all what it takes to provide functional education, its contributions towards today's pre-primary education is examined. On entry into the pre-primary classroom in many institutions in Nigeria today, just like in any other classroom, a few features which are traditional in outlook are observed. First among them would be the presence of chalkboard. Then, one would observe other features among which may include, the teacher's table and chair, pupils' desks and chairs, charts and the like. These are pieces of equipment which would assist in the technology of teaching. Technology is only in progress when these are put to use for the purpose of instruction.

.In the present mode of operation of pre-primary institutions, educational technology has been seen to play the role it had ever been playing in the traditional system of formal education. Ibe-Bassey (1988) notes that as far back as 1912, Maria Montessori had devised the teaching machine and other self correcting devices as contributions of educational technology to instruction. Since then, the use of visual and audio-visual aids have also been common. But the question which arises is how many of these discoveries are used and adequately applied in the classroom despite its long history since discovery.

One observes that today's pre-primary teacher still depends on the chalkboard, textbooks and a few other visuals for instruction. Worse still, since there is no government participation in the dispensation of pre-primary education and since pre-primary education is materially profit oriented, unqualified teachers are employed (Obinaju, 1993). Consequent upon the fact that educational technology denotes the application of the appropriate methods through the use of devices towards achieving the desired goals, unqualified teachers cannot exhibit the required methods. As a result, the expected outcome which educational technology could produce at this level remains lost. Thus, the quality envisaged by the objectives earlier stated is hardly attained.

Over-crowding which is characteristics of the pre-primary class is another aspect which militates against effective application of education technology at this level. At other levels, having up to 30 learners in the class may not be viewed as over-crowding depending on the space available and the maturity of the learners. But, at the pre-primary class, each child needs individual attention. Putting up to 30 learners or more under the care of one teacher and in some cases one assistant limits the attention obtained to a probability of 1:30. For effective teaching and participation which is the essence of educational technology, the teacher should be able to give individual attention to each child for about one half of the school day.

The perception of children is contingent upon class arrangement. The class arrangement often depends upon the space available. The traditional straight sets of horizontal rows sometimes blocks the view of back bench seaters. The conference setting is often not permitted by space available for the class. Because of this, the teacher, even when he is knowledgeable in educational technology is handicapped in the control of learner's perception.

Just as different instructional strategies are required for different behavioural outcomes, the above described limitations hamper effective planning and execution of instruction at the pre-primary level. Nevertheless, a few strategies are seen to be used by teachers. These include the use of play as recommended by the National Policy on Education (1989) and the use of musical activities observed by Obinaju (1992). Others include use of visuals in the form of both two dimensional and three dimensional objects. But these are not all. Educational technology has a higher package to offer towards making pre-primary education more functional and qualitative than what we have at present.

In addition, duplication of efforts and difficulty in the acquisition of instructional materials have been identified as militating factors to effective use of these instructional materials. Duplicating of efforts comes as a result of no storage facilities. Instructional materials once produced are kept with the teacher who produced them to an almost total ignorance of its availability to the other teachers in the school. The same teacher may not need it again for sometime so he may discard it. While another teacher who needs such an instructional material would either have to produce his own or do without it. On the other hand, the ease of production of these materials affects the frequency of use of adequate instructional materials. Especially when the teacher has to prepare for as many as six different lessons in one school day, he prefers to manage the lesson by only talking to the pupils instead of preparing adequate instructional materials. This will not bring the required effect. The current status of educational technology in pre-primary education calls for a proper method of harnessing the former so as to achieve the desired quality in education especially at the level referred to in this paper.

HARNESSING EDUCATIONAL TECHNOLOGY TOWARDS QUALITATIVE PRE-PRIMARY EDUCATION

The fact that every child needs an opportunity for nursery education because of the permanent effects this type of experience has on the child cannot be over emphasized. But the experience to be provided by the school must be worth the importance accorded it. Therefore, in recognition of the lasting effect this education has on the child, all avenues should be explored to make sure that experience provided is worthwhile and properly executed. Educational technology which is the source of strategies and gadgets should be properly harnessed to provide what would best achieve the objectives of education at this level.

For effective teaching and learning, instructional materials have to be produced. For ease of production, adequate tools have to be acquired and to avoid duplication of efforts, there should be a system of storing already produced materials for future use if the need arises. The above needs are solved by a single proposal - the provision of a media centre for every pre-primary and primary school in Nigeria.

The presence of a media centre for use by the pre-primary institution would provide the required equipment for the teaching-learning enterprise at this level. The centre would serve as a central pool for learning materials personnel and other necessary facilities. It would also offer the teacher the opportunity of selecting or producing materials, according to his needs as well as organise materials in order to promote and enrich the teaching-learning experience. By the above description, one notices that it is of utmost importance for every school to have this central pool of instructional materials.

It is however argued that it would be expensive for each school to own a media centre. Therefore, it is advocated that each local government area could provide one for use by schools within the local government area (Ofoefuna 1992).

This proposal looses sight of transportation and time loss which would limit the use of this media centre to only nearby schools. The provision of the media centre in the school is advantageous in that, during the planning of the lesson, the teacher would have a ready source from where to choose his teaching aid. Even when these aids need to be produced, he would do that easily. He does not need to travel long distances to be able to get at a media centre. The teacher could work in the media centre on a daily basis and as need arises as opposed to when he goes to the media centre periodically.

It is agreed that the provision of a media centre is expensive. It is only considered expensive when the cost implications are weighed against the take home gain of the proprietor. This assertion reinforces the need for the three tiers of government to participate in the provision of pre-primary education. The knowledge that pre-primary education is an indispensable experience for every Nigeria child should encourage the government and any individual interested in the provision of qualitative pre-primary education to spend whatever it may cost to open a media centre for use in the school. When the government opens pre-primary institutions and sets the correct standards, the individual and corporate proprietors would have an example to follow.

A media centre cannot on its own provide qualitative pre-primary education. Proper usage of the facilities of these media centres are required to give rise to quality in education. This calls for the employment of trained teachers. As noted by Mkpa (1992), materials on their own cannot constitute educational technology. Materials on their own cannot bring about quality in learning outcome. It requires the application of methods. Both methods and materials must be applied relevantly, each complementing the other to bring about the desired learning outcome. The practice of proprietors employing unqualified teachers should therefore be stopped if appropriate methods are to be used with materials in schools.

In addition, it is strongly recommended that periodic workshops and short in-service courses should be organised and made compulsory to pre-primary school teachers after their initial teacher training programmes. During such sessions, teachers would have the opportunity to develop and improve upon competencies in the production and utilization of instructional materials. Pupils' holiday periods offer such opportunities in timing for such teacher improvement seminars and workshops. The schools media centre could offer a very effective venue except when the workshop is organised for a cross section of schools. This in effect means that the school should not wait on the government for the organisation of such workshops and seminars. In fact, if the workshop is organised in the school, the school will at the end experience increase in wealth of instruction materials as well as increase in teachers' competencies in the production and use of instructional materials. Ekpo (1992) notes that better quality teaching comes as a result of "teachers who are skilled in the design, production, use and evaluation of instructional0 materials".

However, the responsibility of organizing workshops and in-service courses is not, by this recommendation, completely taken away from the government. All tiers of government should provide for such courses. The recommendation made above can serve a great deal where government provision for such services is not fast coming. As recommended by Obinaju (1993), the government has a great part to play to bring about quality in pre-primary education. Most importantly, the government should not shy away from opening such schools. Rather, they should open them and run them as model schools where all the necessary facilities including the media centre are provided and qualified staff employed. The learning outcome would surely be the type which would testify to the effort put in. Moreover, adequate supervision of private schools is required so that lapses such as the employment of unqualified personnel, the provision of sub-standard facilities and overcrowding could be checked.

CONCLUSION:

The objectives of pre-primary education as stated in the National policy on Education (1981) are adequate to produce qualitative education at that level. This quality attainment would depend upon the utilization of the provisions of Educational Technology. Today, lack of proper use of instructional materials, employment of unqualified teachers, overcrowding of learners in classrooms as well as non-governmental participation have been identified as militating against adequate application of educational technology towards the achievement of goals in pre-primary education. A solution that each school should have a media centre which provides for sourcing and production of materials for use has been proffered to restore quality to pre-primary education. Workshops and in-service courses for pre-primary school teachers have been recommended. Moreover, the different tiers of government have been advised to open and run model schools as examples to other proprietors. Pre-primary schools should also be frequently supervised so as to check other militant factors to effective application of educational technology towards the achievement of qualitative pre-primary education in Nigeria.

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