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**Improving  
the  
Quality of Teaching  
in  
Primary Schools**

*Edited by*

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# INTRODUCING THE PRIMARY SCHOOL CURRICULUM MODULES

By

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## Introduction

Our job as teachers is to educate pupils, that is help them to:

1. become literate, numerate and able to communicate effectively,
2. think scientifically and reflectively
3. become good citizens
4. develop morally and socially
5. learn to use their hands well and develop manipulative skills.
6. learn to be proud to be what they are
7. learn to appreciate the dignity of labour
8. learn to use tools for further education at any level
9. develop better human relationships
10. become proud of being Nigerians, and to serve the nation faithfully.

## What is teaching?

Teaching is helping pupils to learn and seeing that they actually learn; that is, exposing pupils to *learning experiences* and finding out if pupils learn from these experiences. What are these learning experiences to which we must expose pupils? Are they different from the usual subjects like English, Mathematics, Science and Social Studies etc. which we teach? To answer the above questions, we will take a look at the meaning of *learning experience*.

*Learning* is change in behaviour resulting from experience or practice. This change must be permanent and must result from experience (which includes practice). Behaviour here refers to any response which the pupil makes to his environment. It includes actions, thoughts, emotions and response of muscles and glands.

Learning by experience - If a child crawls close to a fire, he burns his fingers, cries and withdraws. He crawls away and in future he will not come near a fire. If a boy gets a bicycle, he practices riding it, until he rides the bicycle well. He has learned through practice.

*Experience* is what has happened to one or what one has lived through by observation, feeling and doing. It could also be skill or practical knowledge or wisdom gained by observation, feeling and doing. These become *learning experiences* when selected, controlled and programmed to change pupils' behaviour in certain direction.

### Where do we obtain material for the Learning Experience?

The Government sets National objectives and States' the philosophy of Education. It harmonizes both for self-realization, national unity, industrial and national efficiency, better human relationship, effective citizenship among others. It states objectives of primary education and prescribes curriculum activities for the primary school. The Ministry of Education prepares National Syllabi for primary schools with objectives and content. The school translates these to pupils *learning experiences* in the classroom and in the school.

Translating the syllabi objectives and content into learning experiences in the classroom means preparing a programmed scheme of work or programming the syllabi into *modules* which contain the material for pupil's learning experience and assessing the nature and extent of pupil's learning.

### What is a Module?

A *module* is a unit. It is a compact unit of teaching and learning that can be dealt with in a given period of time. It is used for teaching and as a measure for pupils' learning. It can be used for testing and is supposed to be used for certification in the primary school. How? If a pupil completes work on the modules in all subjects in a class, then, he has performed all the learning activities and achieved all the objectives as confirmed by the assessment. He has therefore learned all the topics as validated by the assessment which forms an integral part of each module.

To complete work on a module means to see that the pupils have learned the topic by performing the activities and achieving their objectives as validated by their assessment. This is different from merely covering the topic.

## Teaching with Modules

Teaching, which is based specifically on modules is referred to as *Modular Instruction*. Modular instruction is easy to use. It saves time and requires little effort. It does not need any specialist training. All it requires is:

- clear thinking ahead
- meticulous planning
- thorough execution

Under the old system, each teacher had to prepare his own scheme of work in all subjects and write his notes on all the subjects. He had to think of the subject matter and the objectives for every lesson every day of the week. This means objectives for eight different lessons a day or forty different lessons a week. This led to inefficiency and uneven standards even in different arms of the same class in the same school. With the introduction of the Module, every topic to be dealt with in all subjects has been broken down into its smallest part called *Content Element*. The *Objectives* for each topic have been formulated and expressed in behavioural terms. That is, they tell the pupil and teacher what to aim at. They also state the answer to be taken as correct. In addition the *pupils' activities* that will lead to the achievement of the objectives have been generated. Similarly, the *teaching aids* to be used and the suggested *teaching hints* have been included. The *Assessment Techniques* which tell the teacher how to monitor the pupils' performance in the activities and assess the achievement of the objectives are also included.

## PRIMARY SCHOOL CURRICULUM MODULES

The primary school curriculum modules are programmed schemes of work banded on the national syllabi for primary schools. As has been stated earlier, they are simple, easy to use and understand and can be very useful for teaching and continuous assessment practice in school. In fact, if they are well used, all the fears teachers express about the extra work load and assessment places on them will be a thing of the past. This is because in actual fact the teachers will not go out of their way to do any extra assessment since assessment is an integral part of module instruction.

Each module consists of 8 columns numbered (a)-(h). We will illustrate the contents of each column by looking at page 42 of the Primary School Curriculum module for primary one.

- (a) The number of the module in this case is fifteen.
- (b) The topic, content or subject matter dealt with in the module here is the number ten.
- (c) content elements, that is, a major breakdown of the content into small separate units that form the subject matter. These enable the teacher deal with the topic in small steps- we have seven of such, beginning with introduction of a set of 10 objects as No. 1 and ending with 7 counting in tens.
- (d) Objectives - these are the knowledge to be gained or the skills to be acquired by the pupils after the teaching/learning exercise. These are stated in behavioural terms, that is, in terms of what we expect the pupil to be able to do or the changes we expect in the pupil at the end of the module. These objectives are usually stated using action verbs. We can thus observe, measure and determine the quality and extent of pupils' learning. For Module 15, six objectives have been stated and they include 1. identify a set of 10 objects...6. count in tens i.e. the bundle of 10 sticks as 1 ten 2 tens, 3 tens etc.
- (e) Pupils activities that will lead to the achievement of the objectives. Eight such activities are suggested for Module 15, these include 1, collect a set of 10 objects. 2, play various games using the number and numeral 10.; 8 count bundles in tens e.g. 1 ten, 2 tens, 3 tens etc.
- (f) This column contains two important things. The first one is Teaching Aids which is labelled (A), while the second one is Teaching Hints which is labelled (B). These are merely suggestions to the teacher on the teaching aids and approach to use. The teacher is free to use other types of aids or techniques depending on the peculiarity of his environment. The Teaching Aids suggested for Module 15 include sticks, strings, seeds and two empty tins. Three teaching hints were also suggested.
- (g) Suggested assessment techniques (A/T). These are suggestions on the means and methods through which the teacher can observe or detect and measure the extent of the knowledge gained or the skill acquired by pupils as they perform each activity. There are two columns here, the ACT, merely stands for the number of



each activity while the A/T tells the teacher what to look for and how. These activities are written as abbreviations and the teacher is directed to the appendix after Page 98 to find the full meaning. Some of the activities listed for Module 15 are as follows:

- PW - Practical work; WW - Written work
- MS - Making of sound; CO - counting
- CD - Class discussion; ID - identification
- QQ & A - oral questions and answers.

- (h) **Period** - This is the period of time work on the module is expected to last. It is usually stated in weeks. A teacher is not bound by this expected time. Sometimes she may need more time and at other times she may need less time. The teacher has to use her ingenuity to assess when more or less time is needed.

### Modular Instruction

Every module consists of groups of items of activities which may be referred to as packages. These are what is required for completing work on a project, module or lesson. The various packages have been identified as (a)-(h), for instance the third package of items or content elements. If all the packages required for every lesson are made ready in advance, it will make for convenience, efficiency and effectiveness. Modular instruction consists of two steps.

#### Step I: Preparation

This involves:

1. Selecting programme for instruction, that is, the topic from the content elements and the instructional procedures or method to be used.
2. Selecting/preparing and arranging the packages to be used.
3. Setting the stage for pupils' activities;
4. Getting ready for the teacher's role during instruction; e.g. getting all the leading questions you wish to ask ready.
5. Providing a suitable and attractive classroom climate.

It is necessary to consider pupils entry behaviour before the first lesson on any module. This involves a consideration of pupils' motivational state and pupils' level and quality of intelligence or

intellectual ability. This will be treated in detail under lesson preparation and plan.

### *Step 2 - Practice*

1. Giving of quality instruction, that is, the presentation, brief explanation and the ordering of the elements of pupils activities so that both the slow and fast learners master the objectives of the lesson.
2. Close and efficient monitoring of pupils' activities as the lesson progresses. This may involve:
  - (a) Prompting pupils to start on their activities
  - (b) Guiding them step by step to work towards the objectives.
  - (c) Provoking them to think for themselves.
3. Assessment of the pupils mastery of the objectives.
4. Giving feedback of the results of above to pupils and teacher.

### **Assessment**

In Modular Instruction as in all types of instruction, Assessment is an integral part of teaching. If we refresh our minds with our working definition that; 'Teaching is exposing pupils to learning experiences' and assessing the nature and extent of pupils', learning from these experiences. From this definition, our assessment should not be delayed till the end of the lesson or module. This is what *Continuous Assessment* is all about. Continuous Assessment involves the assessment of activities performed and objectives achieved. These are called Auxiliary performance and Terminal performance. Auxiliary performances are pupils' performances that lead to the achievement of the objectives, that is, pupils' performances in the activities under column (e) of each module. For instance, if a child is able to tie a set of 10 sticks in a bundle, he has mastered activity 6 in module 15 on p.42. If pupils master an item or skill, they should be moved on to the next one. Those who do not master it should be made to repeat or perform an alternative activity devised for them. This is the major difference between the use of modules and the old teaching method. In Module instruction, the emphasis is that each child is encouraged to move at his/her own pace.

Terminal performances are the performances of pupils' on the objectives achieved. At the end of a lesson or at the end of the teaching/learning activities on the module, pupils should be made to

work through objectives. For instance, pupils are made to tie a set of 10 sticks in bundles of tens and assemble sets of 10 sticks in bundles of tens could be made to count in tens thus validating the achievement of the objectives. This is the terminal performance. Here pupils are assessed based on the objectives in column (d). Some pupils who are able to tie a set of 10 sticks in bundle or assemble sets of 10 sticks in bundles of tens may not be able to count in tens. The advantage of assessing them on both the auxiliary and terminal performance is that all pupils will be able to earn marks on what they can do. In this way there will be no outright failure and pupils are encouraged to keep working.

### Considerations in Teaching

The methodology a teacher can use in teaching primary school children for better results have certain principles which we have to remind ourselves of, this will enable us function as better teachers.

Some of the principles chosen which have bearings on successful teaching are:

- Intellectual/Cognitive development
- Recognizing individual differences
- Motivating children to learn
- The classroom environment
- Classroom organization

### *Intellectual/Cognitive Development*

Intellectual/Cognitive development is concerned with the changes that occur in the child's way of forming concepts, perceiving, thinking and solving problems as the child grows older. Let us examine first the idea of *concept formation*. How does a child come to recognize that two or more perceptually dissimilar objects can be considered similar? Tasks were arranged for children to engage in, children were given familiar every day objects to classify into "resemblance groups". A seven year old girl was able to recognize the similarity between a corn seed and a pencil because they were both yellow; and that between grass and a bean plant because they were both green. Although these objects are different in form, she could coordinate the differences when the objects are of the same colour. On the other hand, she consistently rejected the similarity between a piece of chalk and the pencil. From this behavior, one can see that for her, similarity does not include function similarity. The child has the notion of function because she knows what one does with a chalk or

pencil. But at this stage of her thinking, the notion of function seems to be specifically tied to one object. In other words, she cannot compare two objects in terms of some abstract attribute such as function.

When an older child aged eleven years was asked to categorize the objects, she was able to shift from one category to another with ease. More importantly the older child demonstrates that there is a basis for putting things together by first thinking of the criterion of the group and then selecting those things that belong to that group.

These activities with the children tell the teacher a great deal about children and about teaching and learning. The first and rather obvious observation is that what constitutes a resemblance to children of different ages differ. The younger child is limited to the concrete aspects of objects; therefore here concept of resemblance are not completely formed. This brings us to an examination of children's thinking.

There are four main stages that the child's thinking go through from birth to adolescence. These four stages according to Piaget are:

- (1) the sensory motor stage (0 months-18 months)
- (2) the pre-operational stage (2 years-7 years)
- (3) the concrete operational stage (7-11 years)
- (4) the formal (12-15 years).

The change from one stage to the next is marked by definite landmark. Children at the primary school are usually aged between 6 and 15 years. They are therefore at the stage of pre-operational/concrete operations. These have implications for the teacher.

The first is that children's thinking goes through stages and a knowledge of where the child is, is essential to the teacher who is going to work with children fruitfully. This enable the teacher to plan appropriate learning experiences for children at different stages.

The second implication is that the way in which children reason about their environment is different from those of adults. For example, children in the concrete operational stage often believe that the moon follows them as they walk along at night. A teacher who attempts to give an explanation that is different from the one the child holds will face difficulties. Such a teacher is better off waiting until the child is capable of formal reasoning before attempting any contrary explanation.

The third implication is that if, in fact, children have their own explanations about the world, how do we get them to substitute their

unscientific reasons with our scientific explanations? The truth is that we cannot.

The question should be how do we get children to learn? The teacher has to begin by first acknowledging that the child's approach to solving problems is different from his own. The primary school child learns mostly by interacting with things in his environment and working with materials that afford him the opportunity to ask his own type of questions. As he grows older, the child reaches a developmental stage at which the integration between the material and his experience will force him to abandon his previous convictions for better explanations. This is a process and requires a lot of opportunities for exploring different kinds of materials under different circumstances. When the teacher presents an advanced idea at an appropriate time, the child might remember the words used but not the reasoning underlying the explanation. This is rote learning. However, when the child begins to doubt the correctness of his own explanation, it is the right time for the teacher to intervene by providing examples of materials that will help him test the accuracy of those explanations.

### *Recognizing Individual Differences*

To learn can be merely to make a carbon copy of information in our minds. It can also mean that information must be fitted into an individual's existing intellectual structure and that this structure itself induces change in the process. Committing information into one's intellectual structure makes learning a highly individualistic activity requiring the total involvement of the learner. The teacher, by providing appropriate material, can stimulate and provoke individual learning. However, this only occurs as a result of change that takes place in an individual's perception of the experience.

*How to cater for Individual Differences.* In catering for individual differences, the teacher should act as the guide and facilitator of the learning situation. Teaching materials should be provided to "tell" children "what is" and the children should be engaged in "doing". This is because you cannot get children to learn without their involvement in the act of doing. There will be occasions when the teacher will stand in front of the class comparing findings and experiences and discussing with the whole class. His main task will be to prepare what is needed, keep track of what is going on and ask the right question at the right moment.

The teacher should decide the right moment for any child, and intervene appropriately. Occasionally, a pupil may be bored, or have finished his work or is frustrated. On such occasions, a teacher may provide additional materials, or illustrate a new way to work with materials in order to stimulate further activities.

### *Motivating Children to Learn*

What is motivation? Motivation refers to those factors which increase the vigor of an individual's activity. In educational parlance, motivation is often called effort. In terms of effort, the study of pupil motivation searches for those factors which increase the pupil's effort to make desirable responses. When we are teaching in the primary school, how do we get our pupils not only to learn but also to learn how to learn? Our position has been to advocate an approach that is rooted in investigation. When the child interacts with an object in a problem solving situation, the nature of the stimulus provided to him should be such that he has to reflect on the situation. Thus his thinking should go beyond rote memory and mere understanding. Our concern in this section is with the kinds of things that will "turn on" children and keep them going. One way successful teachers had done this in the past is to select activities which captivated the children's interest. Also the teacher guided the children to raise good questions. Finding out the answers to these questions was rewarding and satisfying to the children. Children get excited when they are working on something that interests them. This is what is known as *intrinsic motivation*. It works as though something inside a person gets switched on when he finds work that interests him.

Another form of motivation which has been successfully used is *extrinsic motivation*. The two types of extrinsic motivation are reward and punishment. Teachers are discouraged from using punishment because it leads to aversive behavior.

Rewards can be given in various forms. They could be outright gift tokens (material) praises both publicly and privately; positions of honour e.g. teachers chief helper; being given a seat of honour; etc. It is the duty of the teacher to find out which type of reward will elicit the greatest effort and use it when needed. A word of caution is that extrinsic motivation does not lead to enduring incentive to achieve. They are just suitable for short-term encouragements and teachers should recognize them as such. Teachers are therefore encouraged to go more for intrinsic motivation.

One interesting feature of using interesting activities as form of intrinsic motivation is that children will be playing, working, having fun and learning. It would be difficult to try to draw a distinction between when they were playing and when they were working. What is more important is that the children were *doing, experiencing and learning*. Children do not necessarily differentiate activity. We should therefore encourage them to participate in activities that are rewarding.

### *The Classroom Environment*

For the young children, newly or not long in school, the first essential thing is that the environment should be one in which they feel comfortable and secure. This means, among other things that they must know what is expected of them. There should be no confusion either in the general organization which could add to bewilderment that many small children experience when the more intimate world of home is exchanged for the large world of the school. Everything possible must be done to help them feel at ease as soon as they can with a way of life which to some children is very daunting. The child's physical surroundings will make a deep impression on him. If his home circumstances are favorable he will expect at least as much to capture his enthusiasm when he comes to school. If home has less to absorb him, then school may be even more valued because of the new interests which are awaited. In the environment provided by the teacher, there are three factors which have a particular influence on the child's will to learn. These are:

1. The nature of the experience and activity in which he can engage.
2. The material and equipment which can make his activity productive.
3. The organizational framework within which it is all arranged.

### *Classroom Organization*

Teachers often raise the problem of classroom organization when confronted with the activity method of teaching. Children may work independently or in small groups. The number of children in each group usually depend on the type of activity in which they are involved. The ideal is that each group should be small enough so that each child is doing something. If groups are too large or the materials are not sufficient, some children will probably sit back and watch while others