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# UNIT 4 CURRICULUM EVALUATION

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## 4.1 INTRODUCTION

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This is the last unit of Block 1: Curriculum Planning. The objective of this Block was to make you aware of various aspects of curriculum planning and development. We have discussed the process of curriculum planning and development in the preceeding units. In Unit 1 we discussed the concept and scope of curriculum at the secondary education level. In Unit 2 we discussed various factors which needed to be taken into consideration/account while working on curriculum planning. The role of students, community and environment was highlighted in the context of curriculum planning. In Unit 3 you have studied the process of curriculum development at the secondary school level. You also studied the constraints which influence the decisions on curriculum development. Thus so far you have studied in detail the concept and process of curriculum planning and development.

In Unit 3 you came across the expression 'evaluation'. Evaluation is an essential component of curriculum planning and the development process. Curriculum evaluation is a process of delineating, obtaining and providing information useful for making decisions about curriculum development and implementation. In other words, to develop an effective and need-based curriculum you have to base your decisions on empirical evidence.

In this unit we will discuss the concept and importance of curriculum evaluation in the overall process of the development and implementation of curriculum. We shall also discuss various aspects of curriculum evaluation. You will also study the methods of restructuring curriculum. The discussion in this unit will enable you to participate in this regular and meaningful activity. By doing so you will be able to achieve the pre-specified objectives.

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## 4.2 OBJECTIVES

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In this unit we'll introduce you to the need for evaluating a curriculum, the different sources for evaluation, aspects and methods of curriculum evaluation and, finally, restructuring of curriculum.

After going through this unit you should be able to:

- discuss the need for curriculum evaluation;

- identify different sources for curriculum evaluation;
- evaluate a given curriculum or a part of it after considering different aspects;
- use different methods to evaluate a curriculum depending on the stage of development of the curriculum; and
- restructure a given curriculum after careful analysis.

### 4.3 CURRICULUM EVALUATION : BASICS

The process of evaluation is undertaken in order to determine the strengths and weaknesses of an existing or an under-construction curriculum so that improvements can be made in curriculum design. Evaluation results are primarily a function of judging the effectiveness of the curriculum.

#### 4.3.1 The Concept of Curriculum Evaluation

In the previous units of this Block, you have studied how a curriculum is planned and developed. An integral part of such a development process is evaluation and that is what you will study in this unit. Here, evaluation means both assessment of students to find how much of the intended curriculum has been transacted and also what actually happens in a classroom as experienced by the students when they are involved in learning activities. These experiences of the students need not be confined to the four walls of a classroom and within the stipulated time frame of a rigid school schedule. These could also include activities which form part of hidden curriculum like wearing a school uniform, standing up when the teacher enters the class and

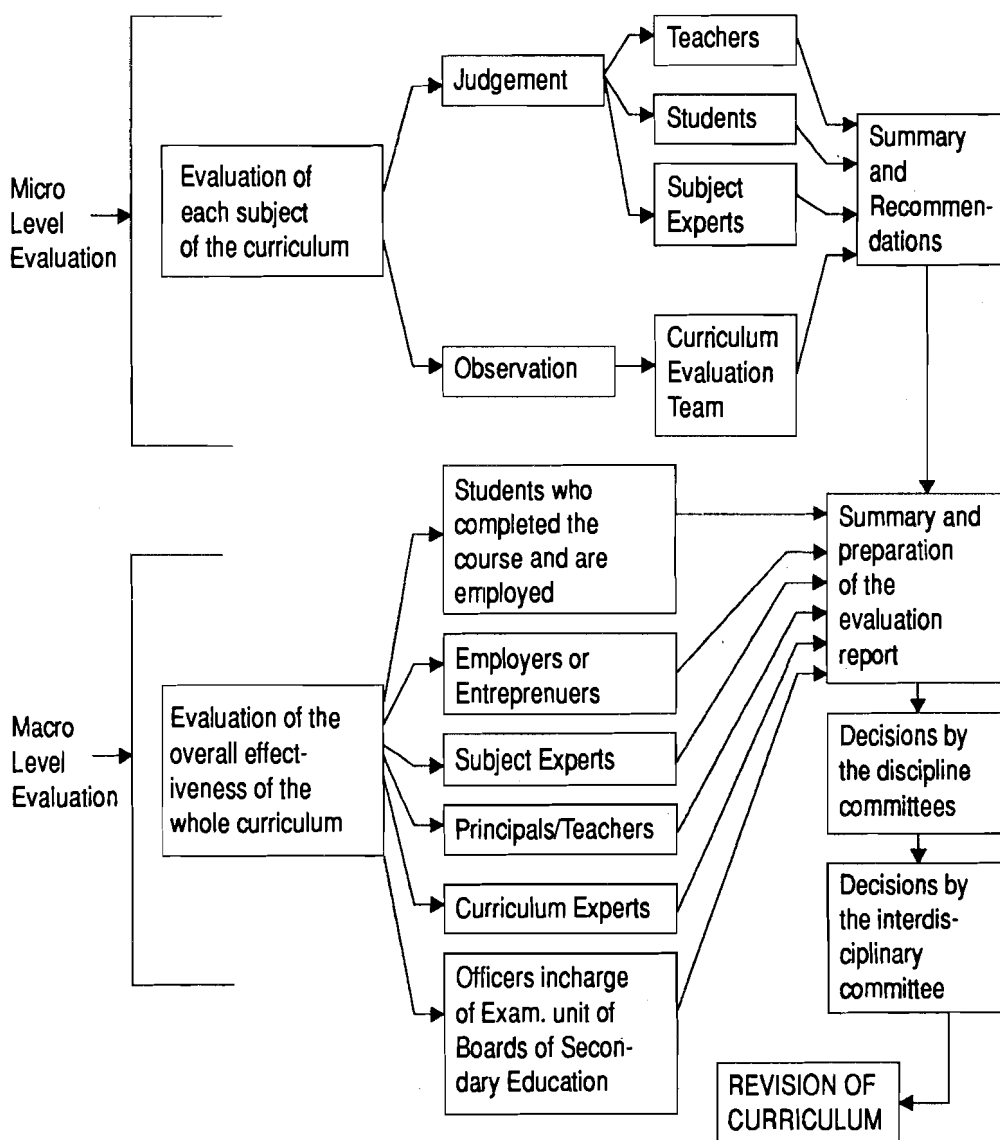


Fig. 4.1 : Curriculum Evaluation Process

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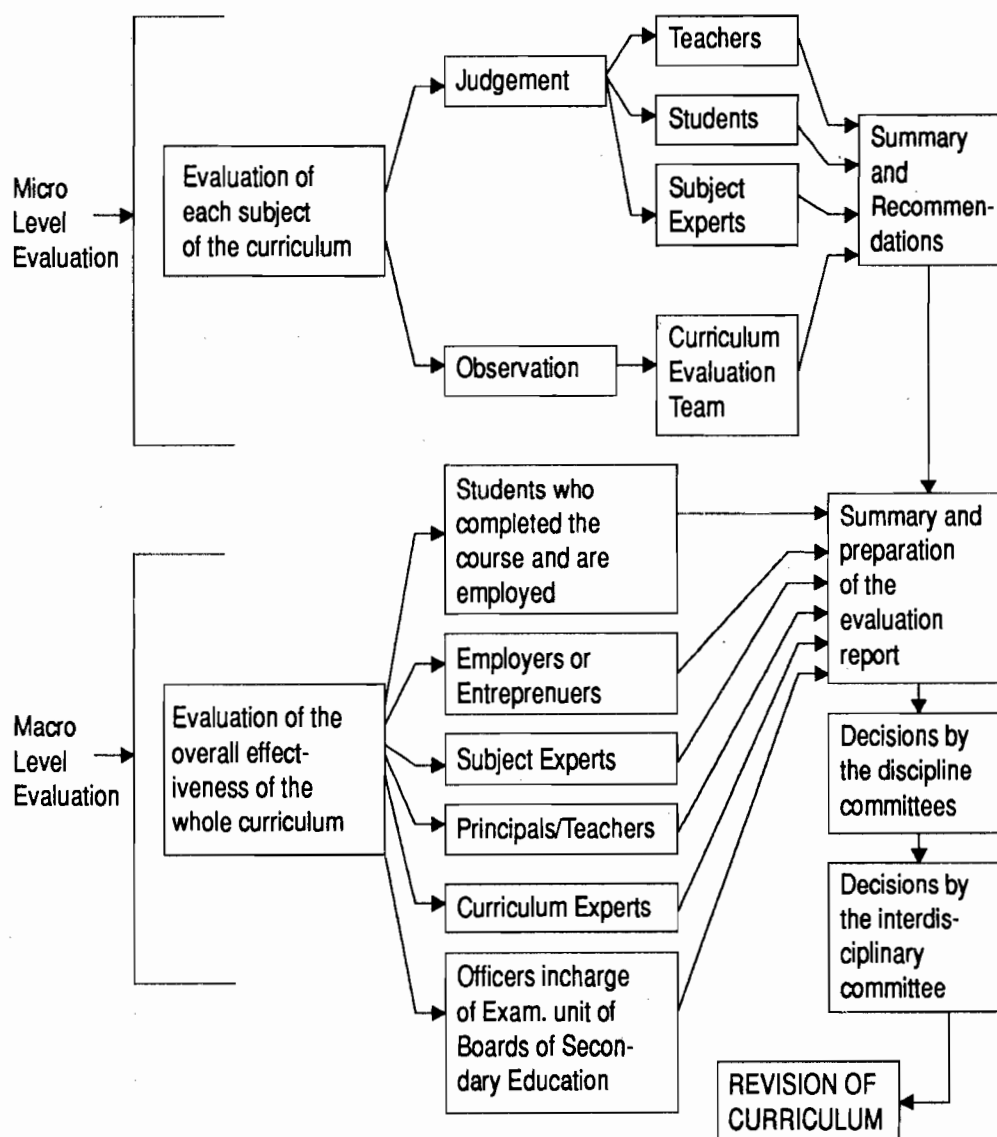


Fig. 4.1 : Curriculum Evaluation Process

helping each other in organising an exhibition in the school. Thus we are interested in looking at evaluation not just as the evaluation of activities inside the classroom but also as the evaluation of the school as a whole against the curriculum issues. There are differing views on this among teachers, parents and school authorities. There are schools where the entire emphasis is on term end-examinations and all activities are geared towards that. There are other schools where emphasis is on the realisation of hidden curriculum and overall development of the child.

Existing educational programmes are criticised not only from the point of view of their content, but also from the point of view of the mode of instruction. Although there is research evidence to prove that memorising factual information contributes very little to the intellectual development of a student and does not improve his ability to solve problems, most textbooks are still crammed with factual information that students are required to memorise. Our term end-examination questions are also directed towards testing the memory power of the students. Both these aspects determine to a large extent the activities of a teacher in a classroom. As a result the teachers devote most of their time in a classroom in explaining difficult issues contained in a textbook. The textbooks or the examinations do not provide much opportunity for mental faculties like analysis, synthesis, discovery, problem solving and creativity. It is the process of curriculum evaluation which can provide a way to improve the system. Thus, curriculum evaluation is the collection and provision of evidence, on the basis of which decisions can be taken about the feasibility, efficiency, effectiveness and educational value of curricula.

The curriculum evaluation process is schematically represented in Figure 4.1. For details please see Section 4.6.

The curriculum evaluation process is not a one-shot affair. It is rather a dynamic and cyclic process. Curriculum evaluation plays its role in all stages of the curriculum cycle. The curriculum cycle is schematically represented in Figure 4.2.

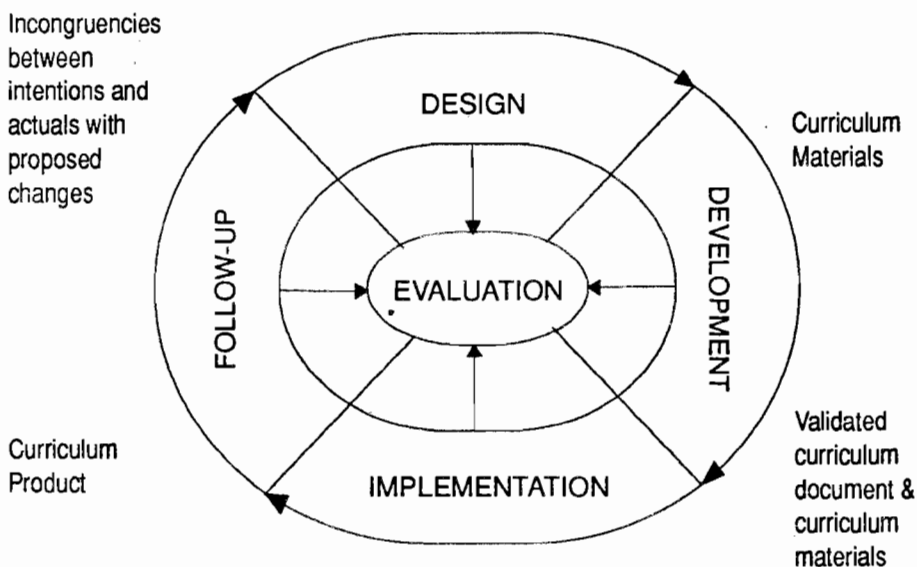


Fig. 4.2 : Conceptual Framework of Curriculum Cycle

The curriculum cycle shows that curriculum evaluation is a comprehensive activity. It should be frequent and recurrent. It is needed at almost every stage of curriculum design and implementation. Through frequent evaluation of curriculum we show whether we are really moving towards the pre-fixed goals.

### 4.3.2 Need for Curriculum Evaluation

What would happen if the curriculum for a particular grade is not revised for a long time? Almost any one of you can guess the answer. It would become obsolete, recent developments in the field will not find a place in it; it will not be effective and efficient. In order to develop an efficient and effective curriculum what should we do? We should evaluate the existing curriculum and modify it to make it more relevant. Thus the need for evaluating a curriculum emerges from the field. In any content area there would be developments taking place periodically and if the current changes are not incorporated, the students would be unable to know the reality. In order to incorporate recent developments and to fit them into the structure

of the course one requires to analyse curriculum systematically. This scientific analysis if followed up logically leads to curriculum evaluation.

There could be quite some **dead wood** in terms of concepts and practices in a curriculum frame, which become outdated over time and are no longer in practice in the field. How do we remove such concepts and practices from the curriculum? This also requires a scientific basis and analysis. Curriculum evaluation helps one in taking such decisions objectively.

A particular curriculum may look good on paper but the actual output in terms of the quality of the product may not be judged very well by the consumers. For example, the post-secondary institutions (consumers or recipients of the secondary school products) may have several complaints about the way in which a particular content is taught at the secondary level. How do we improve the effectiveness of the curriculum implementation so as to reach the expected level of the post secondary institutions? A curriculum evaluation exercise would help us modify curriculum and improve its effectiveness.

To improve the efficiency of a curriculum one has to analyse the outputs of and the inputs into the educational system and make the necessary modifications as revealed by the analysis. This can be accomplished by carrying out a curriculum evaluation.

There could be differences between the intended curriculum and the operational curriculum. Intended curriculum refers to the prescriptions in the curriculum document including the operational and evaluation procedures of a course. The operational curriculum refers to the actual processes in a classroom through which the intended curriculum is transacted. There could be differences between what is intended and what is implemented. To reduce this gap and bring it to a reasonable level of acceptance, curriculum evaluation would again be helpful.

These examples show the need for curriculum evaluation during the development of a curriculum, as a review mechanism and also as an integral part of curriculum implementation.

### 4.3.3 Importance of Curriculum Evaluation

Now the question arises "Why do we need curriculum evaluation?" The professional response to this question stresses improvement of student learning, and hence improvement in the quality of education. The following are the main purposes of curriculum evaluation.

- **To develop a new curriculum:** If you wish to develop a new curriculum for a vocational course at the secondary stage, it would be worthwhile to evaluate a current curriculum from a different system before adopting it to our emerging requirements. The usual practice would be to prune an existing curriculum to suit our new requirements because at times the decisions in the planning process can be quite arbitrary. Such a process leads to the risk of overloading the curriculum. To make objective decisions on the development of the new curriculum, evaluation of the existing curriculum is necessary.
- **To review a curriculum under implementation:** It may be required by policy planners and decision makers to get an immediate feedback on the implementation of a curriculum in order to make amendments if required for effective realisation of all the objectives related to it. A curriculum evaluation exercise would be necessary for this purpose.
- **To remove 'dead wood' and update an existing curriculum:** As discussed in Sub-section 4.2.2, it is essential to remove obsolete ideas and practices from a curriculum and include current developments in the curriculum. In order to make objective decisions about inclusion or deletion of content or practices a curriculum evaluation exercise would again be necessary.
- **To find out the effectiveness of a curriculum:** To make an objective evaluation of the effectiveness of a curriculum in terms of the achievement of its immediate as well as long-term objectives, a curriculum evaluation exercise would be essential. This evaluation is different from the evaluation of the students of a course for the purpose of certification. The difference is that curriculum evaluation is more comprehensive and includes student evaluation plus the feelings generated among the students regarding appropriateness of the various components of the curriculum.

As shown by these examples, curriculum evaluation can help teachers and decision-makers take objective decisions on curriculum, and its development and implementation. This indeed is the major purpose of any curriculum evaluation exercise. The results of evaluation can be used to improve future educational effort, otherwise there is little sense in carrying out any curriculum evaluation activity.

The administrators, policy makers, teachers, parents and even students are concerned with the way(s) in which a particular school curriculum is being implemented. They have reasons enough for making it accountable. It is the curriculum evaluation process alone that can provide immediate feedback on the status of implementation of a curriculum. Thus, the process of curriculum evaluation gains importance because of these reasons.

In Unit 2 of this Block you have read about the various considerations for curriculum planning i.e., the demands of the discipline, needs of the students, institutional demands, social and environmental considerations. If one has to plan a curriculum according to these considerations, a thorough need analysis has to be carried out. This can be accomplished through the curriculum evaluation process. This would help the curriculum planners identify and list the desired output specifications of the curriculum being planned after a careful analysis of the job and the tasks to be carried out by the students after completion of the course. In this context also, the curriculum evaluation process gains importance.

In Unit 3 you have studied the curriculum development process in which the developmental try-out of the curriculum was a necessary step. This try-out is made with the intention of collecting necessary feedback from the field, on the curriculum. A systematic collection of such information and its utilisation is nothing but a curriculum evaluation exercise in a micro context. This exercise also is of importance in the total process of curriculum development.

In this way we can say that the curriculum evaluation exercise derives considerable importance in the total process of curriculum development and implementation.

### Check Your Progress 1

Notes : a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

i) Why do you need to evaluate the curriculum of a particular grade in a school set up?

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ii) State four purposes of evaluating a curriculum.

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## 4.4 SOURCES OF CURRICULUM EVALUATION

There are several sources from where meaningful information can be collected regarding a given school curriculum. Major sources are discussed below.

**Students:** The students of a particular course are the primary and most important source of information regarding how relevant the intended curriculum is and how well it is being implemented. The list of the output specifications can be given to the students who are undergoing a particular course and detailed information can be gathered in two ways:

- by finding out whether the students have really achieved the intended output specifications. They feel they have achieved the objectives of the course. Information is generally

gathered through the evaluation system as prescribed in the curriculum for certification purposes and is mostly quantitative in nature.

- by finding out the perceptions of students regarding the extent to which they feel they have achieved the objectives of the course. This information is more qualitative in nature as these are the perceptions of students and they are of immense value from the point of view of revising the curriculum. Such valuable data can be collected even from students who have passed out and who have already learnt through the implementation of the curriculum.

**Teachers:** Curriculum review/evaluation should be done by the teachers in the school. However the involvement of others cannot be denied. We, the teachers, are part of the curriculum in the sense that we transact the curriculum in the class. We can give valuable information regarding the implementation of the curriculum. The teachers are valuable agents of curriculum evaluation. Teachers who are not currently teaching the subject but have sufficient content knowledge and background information on a particular curriculum can also be helpful in curriculum evaluation in addition to those teachers who are currently implementing the curriculum. You, as a teacher, should have requisite skills to review a curriculum. To help develop this competence in you is one of the objectives of this course.

**Subject experts:** To get balanced information on the implementation of a curriculum, especially from the discipline point of view, it would be worthwhile to consider the views of other subject experts in the field as relevant and reliable. The subject experts could be from other systems like a practitioner in the field or even a self-employed person. The experts will provide valuable information on the field conditions which would be of tremendous value for the purpose of curriculum evaluation.

**Curriculum experts:** Curriculum experts can provide information on the modern techniques used for developing a curriculum so that it becomes more meaningful from the student's point of view. The age old practice of assembling content points, in a telegraphic language into a syllabus, has become outdated. In the meaningful curriculum the output specifications, are made clear, i.e. the curriculum specifies as to what the students will be able to do at the end of the course, the conditions under which they will be observed and the level of acceptance of errors. Curriculum experts have come a long way since then and their assistance in curriculum evaluation is inevitable. Therefore, curriculum experts are a good source of information for curriculum evaluation.

**Policy makers:** Policy makers occupying responsible positions in apex bodies like Central Board of Secondary Education (CBSE), National Council of Educational Research & Training (NCERT), National Open School (NOS) and State Boards of Secondary Education are also excellent sources of information for curriculum evaluation. By virtue of their position they are better informed about the current and the envisaged changes in government policies regarding economy, industry, agriculture and education. All these areas have direct or indirect implications for school curriculum. There have been quite a few instances in the recent past where even the change of governments in a state was responsible for making specific changes in textbooks of History and Science. Therefore, policy makers can be an important source for the curriculum evaluation.

**Community:** The local community where the products (educated/trained persons) of a particular course are to be absorbed can be yet another important source of information for curriculum evaluation. The requirements of the local community can make the curriculum relevant and need-based or otherwise. A curriculum revised on the basis of needs and requirements of the community will be able to serve the cause of the community better in producing better socialised and more responsible citizens.

**Dropouts sample:** Those students who have dropped out of a particular course can be yet another valuable source of information for curriculum evaluation. These students can pin-point the curricular factors that might have been responsible for their withdrawal from the course. A diagnostic test administered on these dropouts can provide valuable information regarding the misconceptions generated by the present curriculum. This feedback will help in modifying or improving the curriculum.

**Employers and entrepreneurs:** The opinion of the employers who have to absorb the products needed by them, will reflect on the strengths and weaknesses of the curriculum. Those who are self-employed, even in the unorganised service sector can provide valuable information on the strengths and weaknesses of a particular curriculum. Such information can help in making the curriculum socially relevant and useful.

**Check Your Progress 2**

Notes : a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

i) Why should the reactions of dropouts on curriculum be sought?

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ii) Why should the reactions of employers on curriculum be sought?

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## 4.5 ASPECTS OF CURRICULUM EVALUATION

There are several aspects of curriculum evaluation which makes the evaluation process a comprehensive activity. Some of these activities are as follows:

### 4.5.1 Pre-testing/Post-testing

This is one of the most commonly used aspects of evaluation of a curriculum. The procedure adopted is similar to that of a before-use and after-use strategy.

A test is devised to measure the terminal behaviour of students after they have covered a curriculum. Sometimes two parallel forms of the test are developed as T1 and T2. One of these tests is administered on the students before they start on a particular course in order to assess the level of their knowledge or competence. Learner scores on pre-tests reveal the status of the student against the set criteria or the expected terminal behaviour. The students are then exposed to the curricular experiences as planned and at the end they are given the second test. The difference between the test scores of pre-test and post-test is attributed to the effectiveness of the curriculum and thus is one way of evaluating the curriculum. If the improvements are substantial as expected by the curriculum framers, it establishes the strength of the curriculum. If there are some terminal behaviours that have not been achieved by many or even by one group of the students, it indicates that the curriculum has to be modified. This pre-and post-test can be diagrammatically represented as follows:



Fig. 4.3 : Pre and Post Testing of Curriculum

In many standardised curriculum materials you will find such provisions whereby you can assess the student's current knowledge and skills in a particular area and then take up the course concentrating on those aspects in which the student is weak and skipping certain portions where he/she is strong as revealed through the pre-test. Such structured curriculum is easy to adapt to a specific environment or situation; it can be modified according to the required specifications. Most of the Indian school curricula are not so highly structured. Individualised learning kits for different school grades are also available; these kits have the inbuilt pre-and post-tests. That can be used by the teachers.

You, as a school teacher, can attempt to develop such curriculum material especially in those areas where a large number of students show common difficulties in learning. Such activities will help you serve the student community better.

### 4.5.2 Norm-Referenced Testing and Criterion-Referenced Testing

Testing a curriculum can be done with reference to a set of criteria called criterion-referenced testing (CRT) or in relation to a norm like a normal distribution called norms-referenced testing



(NRT). Generally, in the Indian school system, we use norm-referenced testing where the results of a test are used to compare two sets of curriculum. On the basis of this type of testing, the curriculum can be ranked as high or low.

In criterion-referenced testing, all the objectives of a course are listed in behavioural terms specifying the conditions under which the criteria are to be observed and the level of acceptance with tolerance limits. On implementation of the curriculum if the objectives are attained to the specified level, it indicates the extent to which the curriculum has served its purpose. Comparing with a norm or standard, one can evaluate a curriculum for its attainment of objectives.

### 4.5.3 Formative Evaluation

We have tried to minimise the use of jargon so that evaluation can be seen as a straight forward, easily attainable process. Even then there are some terms that can be used to provide a deeper understanding of some of the issues involved in curriculum development. Formative evaluation is one such phrase. It is conducted during the planning and development phases of curriculum. Formative evaluation is carried out during the process of curriculum development. The result of formative evaluation provides feedback to curriculum developers and enables them to correct flaws detected in the curriculum. Formative evaluation thus contributes to the modification during the formation of the curriculum and hence the term formative evaluation. The results of formative evaluation may help in the following two activities: selection of course components, and modification of course elements.

Formative evaluation is carried out at two levels – curriculum development process level (process evaluation) and curriculum implementation level (product evaluation). Let us elaborate these two levels of formative evaluation of curriculum.

**Process evaluation:** Process evaluation refers to evaluating the curriculum implementation processes, like the variety of methods and media used and their appropriateness. Similarly, the attainment of long term objectives which can not be measured in tangible forms can only be inferred through a particular way of curriculum implementation. This is done through process evaluation. For example, developing a scientific attitude is a long term objective of science subjects. This can not be achieved through one specific activity but the way the curriculum is implemented or transacted over a long period. Such objectives can be evaluated only through a continuous evaluation of the processes.

**Product evaluation:** The product of a curriculum is the student with his learning outputs in terms of knowledge, skills or attitudes. Evaluating him or her continuously during the implementation of the curriculum will be a formative evaluation of the product. The data obtained from this evaluation can be continuously used to modify the learning experiences so that all the objectives of the course are attained by all students. This level of attainment of objectives is called 'mastery level'. Therefore, formative evaluation of the product helps in achieving mastery learning by all the students. Since the evaluation is formative there is a scope for improvements and modifications at every stage of development.

#### Check Your Progress 3

Notes : a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

i) What is formative evaluation?

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ii) What is the difference between process evaluation and product evaluation?

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## 4.6 METHODS OF CURRICULUM EVALUATION

Curriculum evaluation can be done by an external agency or by insiders (those who are involved in the planning and development of the curriculum) or by a combination of both the groups. A combination of outsiders and insiders would be preferable to get a comprehensive and objective evaluation. The methods of evaluation vary from a questionnaire based evaluation to evaluation based on unstructured interview. The method of collecting information would depend on the objective of evaluation. When we require more qualitative descriptions of the implementation of the curriculum, unstructured or structured observations can be used. When we require quantitative data regarding various aspects of a curriculum being designed, a check-list can also be used. Similarly many other techniques can be used depending on the purpose of evaluation and the stage of evaluation i.e., whether evaluation is being done at the development stage or at the implementation stage. Curriculum evaluation at the planning stage is mostly confined to job analysis or task analysis. Similarly the content analysis that follows also requires the support of formative evaluation. These exercises are usually not practiced in schools and so the curriculum suffers from several drawbacks. A well prepared school curriculum should accommodate an evaluation cycle at the planning stage also.

### 4.6.1 Evaluation during Curriculum Development

One of the major tasks during the development of a curriculum is to prepare an exhaustive list of specific objectives to be achieved through the curriculum. Once the list is prepared, it has to undergo an evaluation cycle. The list may be supplied to a set of practicing teachers for their specific comments, additions and deletions, if any. In addition to working teachers, information from other individuals like prospective employers of the products, the next higher grade teachers, a group of prospective students, planners and administrators, etc., can be sought to check whether the entry behaviour of their grade suits the output specifications. Based on the feedback collected from the evaluators the objectives can be modified.

A second major task which requires the support of an evaluation exercise during the development of a curriculum is the instructional materials that have been prepared to achieve the objectives. These materials have to be tried out on a sample of students for their feedback on their learning routes and difficulties. A field tryout with a small sample is ideal in getting adequate evaluation information from a sample. This can be used for further improvement of the material. Data collected from the inbuilt evaluation exercises of the learning material can also be used in modifying the learning material. Curriculum material here refers to all learning materials which includes textbooks, self-learning text, audio and video programmes, teacher's manual, assignment questions, project work, etc. Similarly, the evaluation procedures to be adopted during curriculum development also need a tryout and possibly further modification based on data collected through the tryout.

### 4.6.2 Evaluation during Curriculum Implementation

After the curriculum has been tested and the curriculum materials are duly modified, it is important that the teachers and administrators are oriented and trained for proper implementation of curriculum. To implement curriculum without introductory or supporting courses would be quite a severe risk; it may lead to the use of new materials in unsatisfactory ways. Training of the personnel involved and the provisions of all necessary facilities and resources are essential for successful implementation of any curriculum.

Evaluation is necessary at the time when curriculum is implemented as well as after each offering of the course. The purpose of evaluation at this stage is two-fold (a) to find out the areas of support needed for effective implementation of the curriculum in schools; and (b) to control the quality of the product i.e. the educated person. Important information to be collected at this stage includes:

**The existing situation:** All aspects of curriculum according to the curriculum plan need to be studied in order to identify the missing features of the curriculum being implemented in the schools. A check-list which gives all the features of the objectives and the content of the curriculum, students' characteristics necessary to begin the teaching-learning process, teachers' characteristics necessary for implementing the curriculum, basic assumptions regarding how teaching and learning should take place to ensure active participation of the students, additional materials required to implement the curriculum, organisation of the curriculum with respect to time requirements and the order in which the activities and the materials are to be processed,

methods of implementation of the curriculum and evaluation of students' performance can be used to assess the discrepancies or the gaps in the implementation of different aspects of curriculum.

**Effectiveness of the curriculum:** The crucial question in determining the effectiveness of curriculum is to determine the extent to which the students attain the standards or achieve the objectives as described in curriculum planning. Thus the effectiveness of curriculum reveals whether curriculum is able to achieve objectives set by the social system.

Since it is not possible that cent per cent students achieve all the objectives of the content, the question of concern is whether the minimum expected number of students achieve the minimum specified number of objectives according to the criteria. The criteria for judging the effectiveness of the programme should also provide feedback from the employers and ex-students. Effectiveness may also be considered in relative terms i.e., whether the new curriculum is more effective than the previous one. For this a time series study may be most appropriate.

**Acceptability of the programme:** In addition to assessing the effectiveness of the curriculum it is also important to assess its acceptability. Acceptability here means whether the people involved in implementing the programme like it or do not. To get an insight into the acceptability of the programme, the perceptions of students, teachers and the supervisors/administrators of the school should be ascertained.

**Efficiency of the programme:** The expressions – effectiveness and efficiency – are used for specific purposes. The efficiency of curriculum indicates whether curriculum is able to achieve objectives in the most economic way in terms of minimum cost, time and energy. The effective curriculum ensures that pre-fixed objectives are achieved irrespective of the amount of time and/or money spent. Effective and efficient curriculum will ensure that objectives are achieved with minimum resources efforts and money. Efficiency means the ratio between the output and the input of energy and resources. It is very easy to calculate efficiency of a machine in absolute terms. However determining programme efficiency is extremely difficult in the case of any social system, like education. Valid assessment of an educational programme is indeed very difficult. Controlled experiments can be of great help here but it is difficult to control the significant variables. Nevertheless, it is important to assess the programme efficiency relative to those of other programmes in the light of achieved effects. The major questions posed in judging the efficiency of the programme are as follows:

- Do the outcomes of the programme justify the expenditure on the total resources?
- Is the given curriculum more efficient than the previous one?
- Is there any wastage of student time, teacher time or of materials and resources?
- Are equipment and personnel under-utilised?
- How can programme efficiency of a given programme be improved?

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## 4.7 RESTRUCTURING CURRICULUM

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Any given curriculum needs restructuring prior to its implementation. This restructuring can be done at a macro-level and at a micro-level. At the macro-level obsolete elements may be removed, recent developments in the field may be added and the sequence of content may be rearranged. At the micro-level, a teacher may find the sequence of content suitable for a presentation. But if (s)he wishes to have participative techniques of teaching, the sequence may not be suitable and so (s)he would like to reorganise the sequence of the content to suit his/her mode of presentation. Such micro-level reorganisation is often done by teachers who are innovative in their teaching approach. There could be as many ways of micro-level reorganisation of curriculum as there are teachers.

**Pre-testing of restructured curriculum:** Macro-level restructuring when carried out on an existing curriculum requires to be pre-tested prior to implementation. This testing would reveal whether the envisaged changes have the desired effect or whether the curriculum still needs modification. It is preferable to do such restructuring under actual teaching-learning conditions.

**Search for affirmative models for curriculum revision:** The techniques of curriculum revision described in this unit have been in use since long and more dynamic models are being developed by professionals in various fields. Some of the relevant points of such models

developed in technical and vocational education, medical education, etc., could be of interest to those who are involved in curriculum revision even at the school level. There should be a constant search for such models, by educational planners and implementors at the school level. Perhaps, for secondary education a suitable and dynamic model could be developed by those concerned with secondary curriculum development.

#### Check Your Progress 4

Notes : a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

i) What do you mean by effective and efficient curriculum?

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ii) What is macro and micro-level restructuring of curriculum?

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## 4.8 LET US SUM UP

In this unit you have studied five reasons that may necessitate a curriculum revision exercise, viz., i) to modernise a curriculum, ii) to remove 'dead wood' from a given curriculum, iii) to make a curriculum more efficient, iv) to reduce the gap between what is intended and what is actually realised, and v) to realise the latent curriculum which may not be so tangible. You have also studied four purposes of curriculum evaluation viz., i) to develop a new curriculum programme based on the evaluation report of an existing curriculum, ii) to review an ongoing programme, iii) to remove obsolete material from a curriculum and update it with recent developments in the field, and, iv) to study how effective an ongoing programme is.

You have studied a variety of sources from where useful data for curriculum revision can be collected e.g. learners, teachers, subject experts, curriculum experts, policy makers, responsible members of the community and even a sample of dropouts of a programme. Besides these, you have studied different aspects of curriculum evaluation. You have studied the various methods used for curriculum evaluation and the phases during which these methods have to be adopted. The methods discussed may not appear comprehensive enough in view of the pace at which curriculum revision should be taking place as against the pace of developments in various fields. Therefore, it is recommended that more comprehensive curriculum evaluation methods should be developed by practitioners in the field.

The last section of this unit was devoted to restructuring the curriculum at the macro and micro-levels. Macro-level restructuring is required to make the curriculum suited to the approach adopted by an individual teacher for transacting it in the classroom. Micro-level restructuring by one teacher can be different from that of another teacher who takes a different approach about the same curriculum.

## 4.9 UNIT-END EXERCISES

1. Take up a secondary school subject that you have been teaching in your school. Collect relevant information that you may require to evaluate the curriculum according to the suggestions given in this unit. Analyse the results and find out whether the subject curriculum requires any updating. If 'yes' suggest appropriate actions to be taken. If 'no' give reasons and justify the same.
2. On the basis of your experience as a teacher, identify a unit which according to your students is very difficult to learn. Plan and prepare instructional material for its remedial teaching. Try out the material on a sample of students and study the effectiveness of the materials prepared by you.

## 4.10 ANSWERS TO CHECK YOUR PROGRESS

1.
  - i) The need to evaluate a school curriculum arises out of the following reasons:
    - to cope with the recent advancements in the field of knowledge,
    - to remove redundant material from the curriculum which has become obsolete,
    - to identify the gap between the requirements of the next grade and the objectives of this grade and to fill in these gaps with appropriate learning experiences,
    - to make the curriculum more efficient in achieving the envisaged objectives, and
    - to assess the extent to which the latent curriculum has been achieved (in terms of developmental objectives).
  - ii) The four purposes of evaluating a curriculum are :
    - to develop a new curriculum
    - to review an existing curriculum
    - to update a given curriculum, and
    - to improve the efficiency of a curriculum.
2.
  - i) Employers' reactions on curriculum are sought because they are the consumers of the products of a particular curriculum. They are, therefore, the best judges to point out the strengths and weaknesses of the curriculum. The employers will also be able to tell where the students are able to use the knowledge acquired in the schools in practice. Their feedback can make the curriculum more meaningful and need-based.
  - ii) The drop-outs have actually been exposed to the curriculum, hence, they can reveal the weaknesses of the curriculum. The reasons for their withdrawal from the course can also throw light on the effectiveness of the curriculum.
3.
  - i) Formative evaluation, as the term indicates, is carried out during the developmental process of curriculum. The objective of formative evaluation is to improve or modify the product i.e. school curriculum during its planning and development. The results of formative evaluation will help you in the selection of appropriate learning experiences and methods to achieve learning objectives.
  - ii) Process evaluation tests the appropriateness/effectiveness of methods and media used to attain objectives. Hence, evaluation activity is carried out at every stage of curriculum development. The product evaluation tests the effectiveness of the product (curriculum). Hence, product evaluation is carried out once the draft/prototype curriculum is ready. Curriculum is implemented and the students exposed to the curriculum are assessed whether they have achieved the desired objectives.
4.
  - i) Effectiveness of curriculum reveals that curriculum is able to achieve objectives set by the social system. The efficiency of curriculum, on the other hand, not only ensures attainment of objectives but also the achievement of objectives in the most cost effective way in terms of money, time and energy.
  - ii) At the macro-level restructuring, obsolete courses elements are removed and they are substituted by recent/update content. At micro-level the teacher does not change the existing curriculum. S/he adopts various innovative/appropriate teaching techniques in arranging and transacting curriculum. At micro-level the teacher uses his/her resourcefulness in transacting curriculum.

## 4.11 SUGGESTED READINGS

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## GLOSSARY

**Curriculum design** : The process of drawing up curriculum proposals including what to include and how to present in such a manner as to advance the changes of implementing the curriculum with understanding and success.

**Curriculum development**: The process of planning and formulating alternative curricula; it is based on what changes are required where and what procedures are needed for determining what changes are necessary.

**Curriculum evaluation**: The process of assessing whether curricula are achieving their aims and/or can be judged to be worthwhile.

**Educational objectives**: Any learning goal or desired outcome of education; sometimes it refers to explicitly-worded statements specifying the behaviour that learners should be able to exhibit in some measurable form.

**Humanistic**: A movement within education with emphasis on humanistic psychology; a curriculum in which students are encouraged to explore and develop an informed opinion especially on controversial issues in contemporary life.

**Learning outcomes**: The knowledge, attitude, skills, etc., that a learner acquires as a result of some learning experience. These often include intended as well as unintended results of learnings.

**Syllabus**: An outline of the topics to be covered in a course or programme; it usually does not include educational objectives and methods of teaching.

## NOTES