

CHAPTER 2

CONCEPTUAL FRAMEWORK

2.1 CURRICULUM AND ITS STUDY

A curriculum is an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice. It involves both, the *content* and *method*, and also the *process* of reviewing it (Stenhouse, 1975).

The various theoretical aspects include curriculum theory, planning, development and evaluation of curriculum. According to Bruner (1966), curriculum theory is a set of related statements that gives meaning to the school curriculum by pointing out the relationships among the elements of a curriculum and by directing its development. As a minimum, a curriculum should provide a basis for planning a course, studying it empirically and considering the grounds of justification (a formulation of the intention or aim of the curriculum, which is accessible to critical study).

2.2 THEORETICAL CONCEPTS AND DEFINITIONS

In connection with the task of curriculum evaluation it is useful to recall and recapitulate definitions and meanings of certain terms used frequently in this study.

2.2.1 Definitions and Meanings

“**Curriculum**” is generally defined as the sum total of all experiences, which have to be provided in an educational institution. Curriculum was defined by Good (Das et al., 1984) as a general overall plan of content or specific material of instruction that the school should offer to a learner by the way of qualifying the learner for graduation or certification or vocation. According to Wheeler (1967), “curriculum” means the planned experiences offered to the learners under the guidance of the school. It is also sometimes defined as the total learning and educative experiences offered to learners by an institution through its institutional programme to achieve the prescribed objectives (Biswas and Aggarwal, 1971)

“**Curriculum**” has been defined by Tanner and Tanner (1975) as the planned guided learning experiences and intended learning outcomes formulated through a systematic reconstruction of knowledge and experiences under the auspices of the school for the learners' continuous and wilful growth in academic, personal and social competence.

“**Curriculum development**” is defined as the course of action designed to produce a structured set of learning experiences; the outcome may include any or all of student resources, materials, guides to study, teacher's guide, syllabus, programme of learning experiences and instruments (Husen et al., 1985).

‘Educational objectives’ means a statement which describes the knowledge, attitude, skills and values which the learners are expected to acquire after going through some process or completing some activities (Walberg and Haertel, 1990). It prescribes the behaviour the learners should show after they are exposed to the selected learning experiences.

‘Aims’ are broad statements of purpose and intention to transmit culture or to develop a specific way of life (Husen et al., 1985). The chief function of stating aims is to provide an orientation to the main emphasis in educational programmes.

‘Curriculum content’ refers to the particular facts, ideas, principles, problems and so on included in a course of study (Husen et al., 1985).

‘Curriculum evaluation’ refers to the value judgement on any observation, performance test or any data about curriculum. (Husen et al., 1985). It is the process of studying the worth or merit of some aspect of curriculum or the whole of it. Tyler (1949) defined curriculum evaluation as the process of determining to what extent educational objectives are being achieved through an educational programme.

2.3 CURRICULUM COMPONENTS, DESIGN AND DEVELOPMENT

Curriculum has thus been defined in several ways and has no universally accepted definition. The concept of curriculum, its nature and scope may vary from person

to person, place to place, and time to time (Rehman, 1987). The main elements of any curriculum and their relationships can be represented as follows: (Figure 1 & 2)

Curriculum planning involves linkage with management and administration, assessment of the physical conditions in which the school curriculum operates, resource allocation and so on. The most important / obvious dimensions of curriculum planning are formulation of objectives, organisation of curriculum content, preparation of curriculum materials and evaluation (Arora, 1988)

According to Stenhouse (1975), it should offer in planning :

Principles of selection of content, namely what is to be learnt and taught.

Principles for the development of a teaching strategy ... and how it is to be learnt and taught.

Principles for making decisions about the sequence.

The important models that have been developed for this purpose were:

The Objectives model.

The Process model.

The Situational Analysis model.

2.3.1 The Objectives Model

The objectives model is a widely used one. The central features of the model are:

Curriculum activities are directed towards change in learner's behaviour and the objectives are expressed in behavioural terms.

Objectives are measurable.

Disciplines, content area and methods are means of achieving objectives.

This model suggests that planning can be accomplished with a fair degree of scientific rigour (Rehman, 1987). It provides a systematic focus for various branches of the study of education. The advantages include, (a) guiding the teacher in selecting learning strategies (b) designing learning experiences to improve the quality of learning sequence (c) selecting content and (d) assessing learners. However, the disadvantages include impracticability of pre-specifying pupil responses, difficulty in framing and testing behavioural objectives, inadequacy in representing the structure of knowledge.

2.3.2 The Process Model

The process model is an alternative to the objective model. Its approach is that the teacher motivates the pupils to explore the worthwhile educational areas and processes rather than to arrive at pre-specified conclusions (Rehman, 1987). The teacher, more often than not, predicts the changes that are taking place in the pupil's behaviour but he/she needs to be confident of the significance and value of

the enterprise. As there is no guideline or restriction, at times, there is every possibility of emergence of not so relevant or unrelated curriculum. Moreover, the curriculum worker may face immense difficulties in selecting specific content from the vast universe of knowledge and the teachers may experience difficulties in selecting a method. It may be that the process models are of greater importance in the area of curriculum where understanding and criteria are central, precisely because such models counteract (Stenhouse, 1967) the pressures of examination as an objective.

2.3.3 Situational Analysis Model

The situational analysis model is based on the idea of common culture and common curriculum. Its significance is that the model is essentially eclectic and includes some aspects of both the objective approach and the process model. The model envisages the curriculum agency to come to terms with the social context and plan a curriculum accordingly. (Rehman, 1987). Looking at the society as it is now, as well as examining the curriculum of the past and trying to monitor the trends of development, are the demands of the model. It needs information about:

- (i) The learners : language, perception, interest, aspirations, levels of cognitive development and needs
- (ii) The teachers: education, training, interests and aspirations, attitudes, and values
- (iii) The education system : Structure and administration

- (iv) The current curriculum in practice: origins, programmes, subjects taught, language in use, weaknesses and strengths
- (v) The advancement of knowledge: structure of the discipline, influence of science and technology, knowledge explosion
- (vi) Availability of resources: possible physical and financial resources and constraints
- (vii) The schools: Physical facilities and amenities, available teaching aids, school environment
- (viii) The community : socio-economic structure
- (ix) The Nation : National ideology and policy, needs etc.,

This model perhaps fits in with the idea that one of the fundamental principles of curriculum planning is that it is the curriculum that has to be fitted with the learner and in the situation prevailing and not *vice versa*.

As mentioned earlier, planning includes the formulation of objectives, selection of content, teaching strategy among others. Hence it is useful to consider educational aims and objectives in this context.

2.4 EDUCATIONAL AIMS AND OBJECTIVES

The courses and curriculum that are planned constitute the means whereby the students are guided towards a variety of ends, and educational objectives provide the means of clarifying the intentions of the educational process (Dove, 1980).

Two usages of the term "objectives" are generally distinguished either by referring to general objectives (goals) or specific objectives (intended learning outcomes). Educational objectives cannot be considered in isolation. They are generally embedded in some structure of intentions (Armstrong, 1989). This structure of intentions could be either stated explicitly in a plan or a document or left implicitly in the way the curriculum is organised.

The sources for selection of general objectives are: The needs and demands of the society, its culture and what a particular nation aims to transform itself into, over a period of time (Taba, 1961; Kerr, 1962; Wiles and Bondi, 1989). Curriculum development through the objectives includes: Selection of aims for the whole syllabus covering all main areas of knowledge and skill, broad objectives for individual subjects and specific lessons in relation to specific objectives.

2.4.1 Evaluation of Objectives

Educational evaluation cannot be considered in isolation. These objectives are the criteria by which the content is selected and organised, materials are prepared and outlined, instructional strategies and tests are prepared (Walberg and Haertel, 1990). Educational objectives provide the means of clarifying the intentions of the educational process (Dove, 1980). These objectives emerge from the:

Nature of subject matter; and

Needs and demands of the learner and society (Kerr, 1962).

Objectives serve as the guideposts in the process of curriculum development. Hence in any curriculum study, it becomes essential to evaluate the objectives of the curriculum (Anderson, 1975).

The evaluation of curricular objectives includes :

Exploring the scope/significance of each objective in consideration with the nature of discipline and the scientific literacy

The functionality of the objective

The feasibility of each objectives

The teachers' understanding of the objectives.

2.5 SELECTION AND ORGANISATION OF CONTENT

The conceptualisation of a particular course, the selection and organisation of content into a coherent course of study forms an important part of developing curricular material. The criteria generally used for selecting and evaluating the content (Smith et al., 1950; Armstrong 1989; Saylor and Alexander, 1975) are as follows :

1. Is the subject matter significant to the recognised field of knowledge?
2. Does the subject matter stand the best of survival?
3. Is the subject matter useful?
4. Is it interesting to the learners?
5. Does it contribute to the growth and development of a democratic society?

No one of them can be taken as the single best way of selecting subject matter.

Barrow (1984) proposed the following basis of content selection. He contends that during the selection process, the following points should be kept in view.

- i. Intrinsic value of the content
- ii. Use, relevance and reality i.e. it should keep in view the demands of the society from education
- iii. Needs and interests: Achieving a judicious balance between societal needs and individual's interests.
- iv. Culture and knowledge.

Bruner's idea concerning structure of discipline elaborated by Schwab (1964) has frequently been suggested as a device for selecting curriculum content. According to this view, the curriculum workers identify the structural elements of a given discipline and then select content related to (and fully covering) these elements. Selection of basic themes with each particular discipline or subject matter is also a device for choosing content. The more important themes are looked upon as guiding ideas that best explain the knowledge within the discipline.

Another approach for selecting content is the 'exemplar' approach. Wagensche (1970) stressed the significance of selecting only a few curriculum content elements and exhorting the students to study them thoroughly instead of making them go through a vast content.

2.5.1 The Organisation of Content

The organisation of content is based on the following factors.

Sequence: Sequence of content should be determined by the competence of learners in performing tasks at various stages of development.

Continuity: Building up of topic / revisiting concepts for in-depth understanding of further and additional concepts. This is related to sequence.

Balance: it is important that a curriculum should reflect a judicious blend of tradition and modernity, individual and societal needs.

2.6 SELECTION AND ORGANISATION OF LEARNING EXPERIENCES

Curriculum experience involves the instructional component. It comprises of the teaching methods and other activities that take place in the classroom. Teacher-pupil activities and their organisation are crucial in the educational process. The achievement of curricular objectives is contingent upon their proper visualisation and implementation (NCERT, 1990).

Classroom interaction (which also comprises of teaching methods) refers to the *human interaction* between the teacher and student in ways that are designed to achieve the goals. No curriculum, regardless of its design can ignore the content, and, experiences always comprise of curriculum unity.

Learning takes place through the experiences of the student as a learner. Organisation of learning experiences involves the vertical and horizontal relationships (Chandra, 1987).

Rationale for organising learning experiences :

Organisation is the arranging or ordering of learning experiences in such a way that they reinforce each other. It involves careful consideration of two relationships namely, the vertical and the horizontal. Vertical organisation refers to rationalising over time and horizontal organisation refers to relationship of one subject with another (Orlosky and Smith, 1980).

Learning opportunities can be linked by two kinds of devices:

Organising centres indicate the scope of the curriculum. Centres may consist of topics, problems, questions, and projects, which are important in their own right.

Organising elements are threads or strands of knowledge. Concepts, generalisation, skills and values) which are to be extended in breadth and depth throughout a course or program or indeed throughout all of the school life.

2.7 CURRICULUM EVALUATION

Evaluation is a word used in a variety of ways sometimes with imprecise and/or overlapping meanings (Lawton, 1973). It is much wider than measurement. It is more fundamentally concerned with deciding on the value or worthwhileness of

a learning process as well as the effectiveness with which it is being carried out. Curriculum evaluation refers to the process of studying the merit or worth of some aspect, or the whole of a curriculum (Walberg and Haertel, 1990). Depending on the way in which the term curriculum is defined, the focus or objects of curriculum evaluation could include :

- curriculum design
- instructional processes
- materials used in instructional processes
- learning environment
- resources, and so on

In the opinion of Wiles and Bondi (1989), it is purposeful to know:

- how a prescribed curriculum in vogue is being transacted;
- whether the objectives are being fulfilled, and if so, to what extent;
- how a prescribed curriculum gets translated in a teaching-learning situation;
- to examine and evaluate the teaching strategies employed; and,
- whether the content development is continuous and suitable from the perspective of the learner.

It is also essential to find out about the adequacy as well as the provision of the required teaching resources such as teaching aids, laboratories, library books and instruments (Wiles and Bondi, 1989). According to Tawney (1976), it refers in main to judgements made

- (a) about the educational process (What happens in School); and,
- (b) about the products (What students have learnt) may also be included.

Curriculum evaluation is clearly a process by which we attempt to gauge the value and effectiveness of any piece of educational activity which could be a rational project, or a piece of work undertaken by or with the pupils. The purpose of any evaluation would thus vary according to the purposes, views, and conceptions of the persons making the evaluation.

2.8 SUMMATIVE AND FORMATIVE EVALUATION

Evaluation can be undertaken at two levels,

- (i) during the development of the programme; or,
- (ii) after a programme had been developed and implemented.

The former is termed as *formative* evaluation and the latter as *summative* evaluation (Scrivens, 1967). In the developmental phase, the exercise of formative evaluation serves as a 'feedback' and influences the shape of the curriculum through successive revisions. Summative evaluation is concerned with the appraisal of the emergent curriculum as it is offered to the school system.

Curriculum evaluation covers evaluation of objectives, curriculum organisation, curriculum materials etc., to provide feed back to curriculum framers. Objectives can be evaluated as done by Arora et al., (1984) to ascertain if these are in tune with national priorities.

Two distinct views exist with regards to curriculum evaluation; one might be said to correspond to the idea of measurement of achieved objectives. The other view considers evaluation as a collection and provision of information about an educational situation. Cronbach's (1963) definition of evaluation consists of the collection and use of information to make decisions about the educational programmes. The implication is that there is more to evaluate in an educational programme than just its objectives.

Curriculum evaluation has two aspects :

- (a) concern with measurement of achievement of objectives; and,
- (b) as collection and provision of information about an educational situation.

The first refers to quality control in education and the second refers to illumination goal to curriculum evaluation.

Tyler (1949) visualised curriculum evaluation as the process of determining to what extent the educational objectives are actually being realised by the program of curriculum and instruction. In this model a curriculum is not compared with another curriculum but assessed against a set of pre-specified objectives. Trow (1970) gives the aims of illuminative evaluation as to study how a project operates, how it is influenced by various school situations in which it is applied, and what, those who are directly concerned, regard as its advantages and disadvantages.

Two basic approaches to evaluation have been identified: they are the *scientific* and the *humanistic* ideals approaches (Cronbach, 1982). In the scientific approach, decisions about the educational programme are made on the basis of efforts of learners. The data gathered is in the form of test scores of students, which are employed to compare student's achievements. The decision about the programme is made on the basis of this comparison.

In the humanistic approach, the evaluator uses data obtained from thick descriptions of actual events. Data is also obtained from interviews with the participants in the curriculum programme (teachers, students, and curriculum developments) and is utilised for the purpose of evaluation.

2.9 EVALUATION MODELS

2.9.1 Curriculum Product Evaluation

The first usage of the term "curriculum evaluation" refers to evaluation which focuses on products such as courses of study, syllabi, textbooks, and so on and makes evaluative judgements about those products (Walberg and Haertel, 1990).

This type of curriculum product evaluation employs specified external criteria.

In this sense, curriculum evaluation is an examination of the adequacy of the curriculum product based on derived characteristics describing appropriateness.

A. "The Eight Year Study" Evaluation Model :

This work of Tyler et al., (1949) offers an example of curriculum product evaluation characteristics, such as adequacy of teacher's manual for class room application and for providing explanation as to the content selection sequence, presentation, effectiveness of curriculum material, and specification of instructional objectives.

The steps in evaluation as recommended by Tyler (1949) in this model were:

1. Establishment of broad goals of the programme
2. Classification and definition of objectives in behavioural terms
3. Identification of situations where the achievement of the objectives is indicated
4. Development of measurement techniques
5. Collection of student performance data and
6. Comparison of data with behaviourally stated objectives.

B. Provus' Discrepancy Evaluation Model :

This model (Provus, 1971) consists of four components of evaluation viz.

- (a) determining programme standards
- (b) determining programme performance
- (c) comparing the performance with standards and,
- (d) finally determining whether a discrepancy exists between performance and standards.

In this model the programme in operation is constantly judged in terms of fixed standard criteria already established.

2.9.2 Curriculum Programme Evaluation

Another major type of evaluation theory consists of evaluation of curriculum programmes in operation. The term 'curriculum program evaluation' refers to a complex set of interactions between a given instructional programme and its setting (Ornstein and Hunkins, 1988). In this broader context, this is concerned with looking at how a particular curriculum works within its instructional setting. The methods used to collect data in this type of curriculum evaluation are classroom observations, interviews and documentary analysis.

A. Stake's Congruence-Contingency Model

In this model emphasis is placed on (Stake, 1967) a full description of the educational programme and also considers the curriculum process. Three sources of information are taken into account: 'antecedents', 'transactions' and 'outcomes'. Antecedents refer to conditions existing prior to teaching and learning, transactions are the encounters in the learning situation and outcomes take into consideration the intended as well as the unintended, which arise during the implementation of a programme. The outcomes (unlike the Tylerian model) are not restricted to student-learning alone. This model recognises that multiple

"standards" operate depending on the educational setting, instructor and student, and this should be recognised by evaluators. The recognition of logical contingency between the antecedents, transactions and outcomes is an important feature of this model. Here, the concern of the evaluator is trying to make judgements about the programme based on the congruency between the intended and the observed aspects of the curriculum.

B. Evaluation as Illumination

This approach to evaluation (Partlett and Hamilton, 1976) is a complete 'social-anthropological' approach to evaluation, whereby the task of the evaluator is to 'get inside' the group being studied. There is no attempt to impose any external standards, but take as given, the complexities of the educational setting. The outcome of such an evaluation is to isolate the significant features of the curriculum programme in the educational setting and evaluate it.

C. Stufflebeam's CIPP Model

Stufflebeam's Context, Input, Process, and Product (CIPP) Model: This comprehensive approach to evaluation (Stufflebeam, 1971) considers evaluation to be a continuing process. CONTEXT evaluation involves studying the reality in which the programme is run. INPUT evaluation provides information for determining how alternative curricular strategies would be able to contribute to the attainment of curricular intentions. This component of evaluation examines things

such as:

- (i) whether the objectives selected are appropriate
- (ii) content is congruent with objectives of the curricular programme, and
- (iii) the instructional strategies and assessment procedures are appropriate.

PROCESS evaluation examines the implementation aspect of the curricular programme. In PRODUCT evaluation using data about the three factors viz., context, input, and process, the extent to which the objectives are being achieved, is determined.

2.10 TECHNIQUES OF EVALUATION

A variety of techniques and tools are employed depending on the objective of evaluation and also the kind of information required in the context of project in hand (Arora, 1988). Questionnaires, checklists, interview schedules, group discussions, evaluation workshops and Delphi techniques are used.

A brief description of the techniques generally used in this connection is given below:

(i) Observation :

The purpose of observing lessons is to gain access to teacher's logic-in-action (Hawthorne, 1992) and to make an on the spot observation of process of curriculum transaction. Observation schedules help the evaluator to focus his

attention on only those aspects of the process that are most relevant to his investigation.

According to Miles and Huberman (1984), classroom proceedings made (recorded) in anecdotal format provide a straight description of concrete happenings as an additional information to the investigator. Its description value is greatly enhanced when the case can be located as an instance of a more 'general class of events'. To achieve this the investigator treats the case in point as either a representative of or a departure from a particular type.

This method gains credibility when it contains both subjective and objective methods. Interviews and feed back and other documentary evidences may supplement observations.

(ii) Questionnaires :

These are used to obtain the opinion of curriculum users namely, pupils and teachers, administrators, parents and other educational workers concerning various aspects of prescribed curriculum are to be ascertained.

(iii) Checklists :

These can be used independently and also can form the part of a questionnaire. These provide a number of responses out of which most appropriate responses are to be checked by the respondent.

(iv) Interview :

It is the basic technique of evaluation because it is the foremost means of gathering information. These can be formal or informal in nature. The information required should be suitably defined and the presentation of questions should in no case betray any sort of bias on the part of the interviewer.

(v) Evaluation Workshops and Group Discussions :

In this technique, experts are invited at one place to deliberate upon syllabi, materials etc., and to arrive at a consensus regarding the quality of the same. The materials may be evaluated against a set of criteria or purposes that might have been prepared by the project team.

(vi) Delphi Technique :

This technique of 'remote conferencing' is a distinct improvement over workshop technique. It can be used at various stages of curriculum development viz., formulation of objectives, selection of content, evaluation of materials. This technique is cost effective and provides an equal opportunity to all members of the group to express their individual opinion.

2.11 PURPOSE OF CURRICULUM EVALUATION

Education prepares future generation to take their due place in the society. It becomes essential that sub-standard educational goals, materials and methods of instruction are not retained but updated in consonance with the advances in social, cultural and scientific fields (Husen et al., 1985). It is also important to ascertain how different educational institutions and situations interpret a given or prescribed curriculum. Hence arises the need for curriculum evaluation.

Curriculum evaluation monitors and reports on the quality of education. Cronbach (1963) distinguishes three types of decisions for which evaluation is used.

1. Course improvement: deciding what instructional material and methods are satisfactory and where change is needed.
2. Decisions about the individuals: identifying the needs of the pupil for the sake of planning of instruction and grouping, acquainting the pupil with his own deficiencies.
3. Administrative regulations: judging how good the school system is, how good individual teachers are.

The goal of evaluation must be to answer questions of selection, adoption, support and worth of educational materials and activities. It helps in identifying the necessary improvements to be made in content, teaching methods, learning

experiences, educational facilities, staff selection, and development of educational objectives.

It also serves the needs of the policy makers, administrators and other members of the society for the information about the educational system, and to help and guide them to make important decisions with regard to curriculum.