

## **Curriculum Planning - Approaches, Designs, and Models**

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## **Introduction**

In Essential Reading One we discussed several concepts of curriculum and the resulting definitions of curriculum. Curriculum design procedures are considered to be generally based on Dewey's scientific method of problem solving (Dewey, 1910, 1933). The problem of the curriculum requires (1) definition, (2) data gathering, (3) formulating alternative approaches (hypotheses) that may solve the problem, and (4) testing to see which approach best solves the problem. Suggesting that the process of curriculum planning is never ending Ralph W. Tyler (1949) goes on to say that:

‘What is implied in all of this is that curriculum planning is a continuous process and that as materials and procedures are developed, they are tried out, their results appraised, their inadequacies identified, suggested improvements indicated there is replanning, redevelopment, and then reappraisal; and in this kind of continuing cycle, it is possible for the curriculum and instructional programme to be continually improved over the years. In this way we may hope to have an increasingly more effective educational programme rather than depending so much upon hit and miss judgment as a basis for curriculum development’.

This Second Essential Reading of the course will discuss some aspects of curriculum planning including selected curriculum approaches, designs and curriculum models.

## 2.1 Curriculum Planning

It is clear from the concepts and definitions discussed in Essential Reading One that a curriculum is planned for an identified group of learners. The purpose of all curriculum planning is to provide opportunities for learners to benefit maximally from participation in selected learning activities. Curriculum plans by their very nature are simply to guide and direct the nature and character of these learning opportunities.

### 2.1.1 Sources and Influences or Bases for the Curriculum

Various educators have attempted to identify the key sources of data for determining the educational objectives and developing the curriculum.

John Dewey (1902) identified the three sources: learners, society and knowledge as three fundamental factors in the educative process. However, he noted that there is a tendency to treat these factors ‘in their separateness, to insist upon one at the expense of the other, to make antagonists of them’. In 1945 Hilda Taba too discussed in some detail three sources of data in curriculum planning, namely, (1) studies of learners, (2) studies of society, and (3) studies of subject–matter contents.

However, it was Tyler (1949) who systematically analyzed and carefully organized the earlier ideas on sources of curriculum.

Tyler identified the three key sources of educational objectives as follows:

1. The nature of the learners to be educated;
2. The society which provides and operates the educational institution;
3. The accumulated knowledge available and feasible for educating learners.

Saylor et al. (1981) identified the three sources: society, learners and knowledge as bases for curriculum. The values and behaviors defined as desirable by a given society help to shape the aims of education. The purposes, interests, needs, and abilities of learners should guide curriculum planners. Knowledge should be organized to assure its widest generalized meaning and most effective future use.

The history of education shows how the degree of emphasis on each of the three bases has changed over time. Use of one or two bases for the curriculum at the expense of others may create problems. A curriculum based only on knowledge will result in a programme viewed by many learners as irrelevant or unrelated to them and to society. A programme which caters primarily to the needs and interests of students may result in large gaps in the knowledge needed in today's world. A programme designed to meet society's present needs would block out learners' opportunities to generate new knowledge and produce new ideas. Curriculum workers will make choices regarding the relative importance assigned to society, learners, and knowledge as bases for the curriculum and the type of information considered. Saylor et al. (1981) say: "One secret of effective curriculum planning is to assign appropriate weights to a consideration of society, learners, and knowledge. The weight assigned should shift with the type of learning opportunities being planned. However, it is difficult to imagine any effective curriculum plan that had not attended to all three bases of the curriculum".

Tanner and Tanner (1975) say that: "the result of making one of the above three sources and influences dominant over the other is that curriculum development becomes a piecemeal enterprise and the curriculum suffers from imbalance and fragmentation."

It needs to be emphasized here that as society changes knowledge also changes. On the contrary, as our knowledge base increases additional changes take place in society as well. Changes in society and growth in knowledge result from our striving to understand, control, and change the physical and social environment around us. The knowledge explosion is threatening to overwhelm us unless we can find ways of dealing with this new and growing wealth of information. As this knowledge explosion shapes the future, curriculum specialists have two major problems requiring their continuous attention, namely, (1) What knowledge to select and (2) how to organize it. Because our knowledge is changing so rapidly, we need to continuously ask ourselves what is the most worthwhile knowledge and we have to continuously reappraise what we mean by worthwhile.

The curriculum can either reflect society or reflect upon and indirectly help shape society. Teachers may either serve as cogs in a bureaucratic school machine, keeping subject matter safe and sterile, or they may help students think and act by offering specialized

knowledge, raising controversial issues and incorporating problem – solving activities (Omstein and Hunkins, 1993).

Figure 1 shows how the sources of curriculum objectives are viewed as interactive. It is also seen from this Figure how the curriculum is developed through the various sources and forces in interaction.

**Figure 1.** Development of Curriculum through various sources and influences (forces)  
(Tanner and Tanner, 1975).

Curriculum development involves decisions regarding the selection of subject matter, structure or framework for the courses of study, the modes of instruction, and the relationship of courses of study to the life of the learner, the wider world of knowledge, and the larger society. The guiding philosophy determines how the sources are drawn upon, and the nature and extent of their influence in developing the curriculum. Without a guiding philosophy, the curriculum tends to become a product of ad hoc decisions resulting from a combination of traditional practices and more immediate actions.

### 2.1.2 Elements of the Curriculum System

Different elements that need to be considered in developing a curriculum plan and the inter-relationship of these elements are shown in Figure 2.

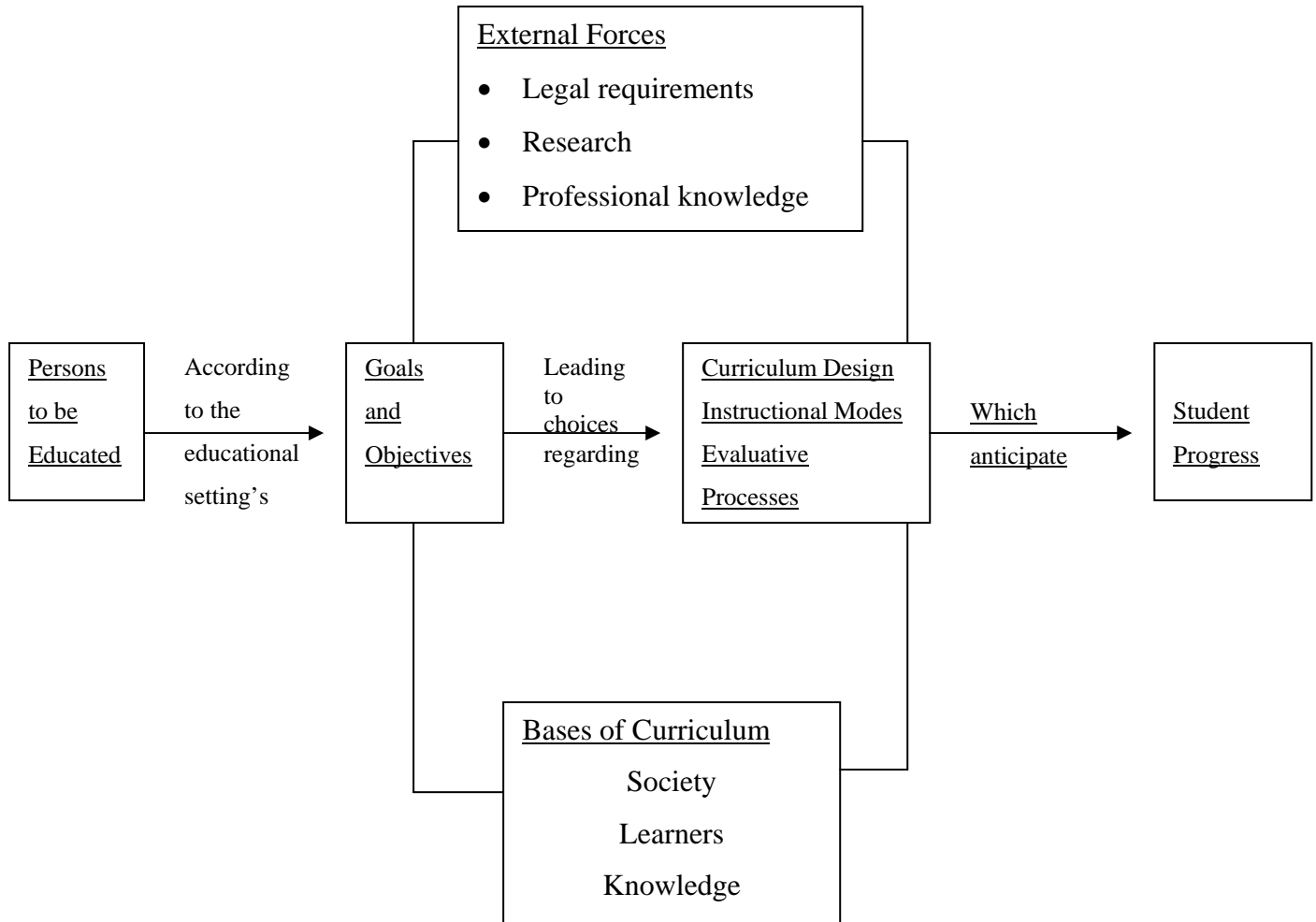


Figure 2. Elements of the Curriculum System  
(Saylor et al., 1981)

Figure 2 shows that a number of factors or elements are considered in developing a curriculum plan. The relationship of these elements to each other is also indicated therein. The system at the outset considers the functioning of the persons to be educated in the society. They have to be guided in choosing and engaging in learning opportunities that will be made available to them through the curriculum plan to be developed. At this point the curriculum planner will have to answer the key question:

What kinds of learning opportunities do these persons need? want?

His or her answer will lead to the goals and objectives. If the learner's personal goals and objectives are congruent with the goals and objectives of the curriculum system, then the learning is almost assured; if not, the learning may be difficult. Saylor et al. (1981) suggest that goals and objectives should be organized into four domains, namely, (1) personal development, (2) social competence, (3) continued learning skills to encourage lifelong learning, and (4) specialization. Agreed upon goals and objectives will provide the basis for selecting a curriculum design, choosing an instructional mode or teaching model to implement the curriculum, and evaluating the curriculum.

It will be useful next to discuss some curriculum approaches, designs, and models.

## **2.2 Curriculum Approaches and Designs**

### **2.2.1 Curriculum Approaches**

On the basis of conflicting viewpoints presented by curriculum experts as regards what should be taught in schools and why and how, several curriculum approaches have been identified. Four major curriculum approaches identified by Hilda Taba (1962) are briefly as follows:

#### **2.2.1.1 Information Processing Approach**

This approach stresses the need for learners to develop cognitive skills for processing facts rather than concentrating upon facts themselves. Examples: Problem-solving and information processing skills and thinking skills.

The development of Information and Communication Technology (ICT) have remarkably enhanced our capacity to store, process, transmit and retrieve information. It enhances the quality of curriculum if it is used more for delivery of learning rather than primarily as a computer literacy tool. The use of ICT provides channels and ways for being efficiently and continuously updated through e-mail, on line discussions and accessing information. Students need to be informed of how to cope with the existing structures of the information society and how to obtain and process information.

Constructivists emphasize the need to help students develop depth in understanding and the newly acquired information to their existing knowledge base. Technology can be

used to increase depth in understanding. Because computers offer teachers the potential to improve learning in the classroom and at home, teachers will need to reexamine how students learn and what role parents play in their children's learning. The linear curriculum of the twentieth century may have to be replaced with a non-linear approach to learning (Henson, 2001).

#### **2.2.1.2 Behaviour Modification Approach**

This approach provides learners with an effective system of sequenced learning activities with a view to changing their behaviour. According to behavioural psychologists, learners' behaviour can be modified by a sequence of stimulus - response - reinforcement procedures. Behaviourists are concerned only with observable behaviour and according to them unobservable behaviours such as 'intuitive thoughts', 'critical thinking', and 'inquiry' can be categorized as observable processes of 'stimulus discrimination and generalization'.

#### **2.2.1.3 Social Interaction Approach**

This approach provides an understanding of one's own view of the world, one's own beliefs and values whilst being sensitive to the beliefs and values of others. Curriculum writers who advocate this approach consider that it is crucial for children to develop a respect for the point of view and dignity of other human beings. They say that this can be achieved in the classroom by examining public issues and focusing upon the alternative views expressed.

#### **2.2.1.4 Personal Development Approach**

The Personal Development Approach gears all the learning experiences to the purposes of the individual. Writers who advocate this approach emphasize that each individual should be allowed to construct and organize his / her own reality.

Joseph L. Schwab (1970) points out that there are limitations to almost any curriculum approach. He emphasizes the need to develop a curriculum that is conducive to change, and that enables scholars and practitioners to work together and test their ideas in the context of charging problems and issues of society.



The older paradigm of curriculum comprising discrete subjects is giving way, both to new subjects, subject – sub divisions, and subject integration. This has implications for what is taught and assessed and how it is taught.

John Dewey is back in fashion not only because he emphasized problem solving as a way of making abstract concepts relevant to the child but also because real – life problems need more and more citizens (not just experts) to apply knowledge they have mastered, and also that problems are complex and often beyond individual expertise.

### **2.2.2 Curriculum Design**

A curriculum design grows out of a series of assumptions regarding the following:

1. Purposes and Goals of Education;
2. Sources of Objectives;
3. Characteristics of Learners;
4. Nature of the Learning Process;
5. Type of Society to be served; and
6. Nature of Knowledge.

Selecting an appropriate design is a highly professional task. It requires a knowledge of the various possible designs and an understanding of the value commitments embedded in each design. From the various categories of designs that are found in the curriculum literature Saylor et al. (1981) have presented five curriculum designs on the basis of the predominant source of data for the goals and objectives. These five curriculum designs, namely, (1) Subject matter / disciplines design, (2) Specific Competencies / Technology design, (3) Human traits / processes design, (4) Social functions / activities design, and (5) Individual needs and interests / activities design will be briefly discussed here.

#### **2.2.2.1 Subject Matter / Disciplines Design**

The primary source of data for goals and objectives of this design is organized subject matter to be learned. Instruction is usually organized by subject disciplines. The curriculum plan is divided into subjects which in turn are subdivided according to school grades. The process involved here is selecting and teaching subject matter and testing student knowledge thereof. This process is easy to implement using knowledgeable teachers, organization into classes, and written tests.

The values of this design are derived from the important role of knowledge in the curriculum. The major determinants of the curriculum are the kinds and amounts of knowledge and its availability for school use. The designers generally assume that there is a body of knowledge which constitutes the curriculum and that the task of designing is to decide what phases and organizations of knowledge are to be taught to whom, and when and how.

The national curriculum projects in the 1950s and 1960s such as School Mathematics Study Group (SMSG) project and Biological Sciences Curriculum Study (BSCS) project which adopted this subjects / disciplines approach viewed intellectual behavior as an active process of inquiry and problem solving. J. S. Bruner (1960) who advanced the case for teaching the structure of subjects said when learners learn the structure of a discipline they understand how things are related.

One major limitation observed in this design is the lack of direct relation of the organized subject matter to the problems and interests of the learner.

#### **2.2.2.2 Specific Competencies / Technology Design**

Competencies to be acquired are the primary source of data for goals and objectives of this design. Instruction is usually organized through instructional designs such as learning modules.

This design is based on a sequential analytic approach to curriculum development. Relevant steps of the sequence are briefly as follows:

1. Identifying all tasks or jobs required;
2. Determining what one should know and do to perform these tasks or do these jobs;
3. Arranging tasks and jobs in appropriate courses;
4. Organizing the knowledge and skill for each task or job into a hierarchy;
5. Determining what one should know for mastery of each knowledge or skill item.

This specific competency approach is also known under the names, Activity aims, Activity analysis, and Job analysis approach.

The desired performances under this design are stipulated as behaviour or performance objectives or competencies. Learning activities are planned to achieve the objectives. Movement from one objective to another is based on the learner's performance. Behavioural Psychology which describes human behaviour in terms of Stimulus - Response bonds provides the theoretical basis for job analysis as a curriculum-making technique. The curriculum which prepares the learner for specific activities that make up man's life is the curriculum that prepares the learner for "life". Since educational objectives are activities and activities are learned through performance, activity analysis discovers both the objectives of the curriculum and the curriculum itself. Vocational educators used the task analysis to specify the skills or competencies to be learned.

One defect in this design is that it is presented as an absolute truth rather than a hypothesis to be tested. Although the result of this approach was a traditional, static subject-matter curriculum, it was reformist in spirit. It was an effort to bring the curriculum closer to life.

Another limitation of this design is that although it is well-suited to assist individuals to learn behaviours it is limited in helping individuals to develop human traits. An example often quoted in regard to this limitation is that although it is well-suited to help prospective teachers to learn to operate audio-visual equipment, it is inadequate in helping them to develop the human trait of 'caring'

.

#### **2.2.2.3 Human Traits / Processes design**

The primary source of data for goals and objectives of this design will be the human traits of learners to be developed. Instruction under this design is usually organized through planned processes such as values clarification exercises.

Application of all curriculum designs influences the development of traits. Some type of process is involved in implementing all curriculum plans. Two features that distinguish human traits / processes design from other designs are: (1) its central goal is the development of predetermined and specific human traits; (2) the central goal is achieved through the implementation of deliberately selected processes. Some examples of these human traits are: creativity, initiative, self-confidence, sensitivity to one's feelings and

emotions, and ability to work effectively with others; learn on one's own; make good judgments; and plan.

Curriculum designs that focus on process skills are based on the following reasons:

1. Development of traits such as lifelong learning skills and interests is one of the significant goals of learning. Therefore these skills and interests should be central to curriculum plans.
2. When the curriculum design directly reflects life processes and skills it will have greater carryover into these processes and skills.
3. The curriculum should well represent processes having a high effective element (for example, valuing).

Human trait development is influenced by a learner's total experiences. The difficulty of assessing the impact of an educational experience aimed at developing a trait is a limitation of this design.

#### **2.2.2.4 Social Functions / Activities Design**

This design emphasizes society as an influence on curriculum development. The primary source of data for goals and objectives of this design will be the needs of society. Instruction is usually organized through community activities or functions. These activities or functions define a good portion of the scope of the curriculum. A design such as this based on community problems can focus on aspects which are significant to the community concerned. Energy, conservation, land use, consumerism, health, equality among all races are examples of such aspects.

Socially centered curriculum design is relevant to student needs and concerns and is therefore of significance and interest to students.

These curriculum designs can directly contribute to the continual improvement of society by meeting its needs.

A limitation of this design is that it affects the selection of subject matter in subject-organized programs or the choice of activities in less structured programs. Another limitation is that it is generally used only for a portion of the curriculum.

#### **2.2.2.5 Individual Needs and Interests / Activities Design**

This approach which emphasizes the interests and needs of learners was used in the eighteenth century by Rousseau in the education of Emile, by Pestalozzi in early nineteenth century in Switzerland, and by Dewey in his laboratory School in 1896-1904. Designs that more directly use learner needs and interests as a base are called by various names such as child-centred, experience centred, and progressive education and more recently, open, alternative and humanistic education.

A knowledge of learners' needs and interests in general is the basis for the curriculum plan under this design. Needs and interests of learners form the primary source of data for goals and objectives. Instruction is usually organized through independent learning activities. This curriculum plan is very flexible. It has built-in provisions for development and modification according to the specific needs and interests of particular learners served by the plan. At appropriate points in the curriculum and instructional process the learner is consulted and instructed. The strengths of this design are:

1. Learning opportunities based on needs and interests are more relevant to the learners;
2. This design involves a high degree of motivation and therefore success of the learner;
3. The design facilitates the achievement of individual's potential.

One major limitation of this design is its possible neglect of social goals. Hence this design is especially appropriate for the personal development domain and for some aspects of the continued learning skills and specialization skills, but not for the social competence domain. The predominant use of this design in curriculum planning is in the provision of options for individual students.

Curriculum plans emphasizing the options concept have the features of a needs and interests / activities design. These features are:

1. The options are based on knowledge of learner characteristics;
2. Scheduling and other arrangements facilitate ready selection and choice of options; counseling services can be made available to assist learners.
3. Learners are actively involved in planning and evaluating the options.

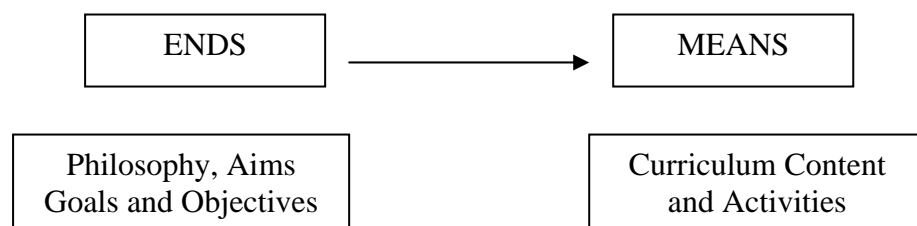
The open classroom is an application of the needs and interests design. Another useful application of this design is Independent Study / Independent Learning which is both a curriculum option and an instructional strategy.

## 2.3 Curriculum Models

### 2.3.1 Tyler's Model of Curriculum Planning

The rationale for Tyler's Curriculum Model was discussed to some extent, in Section 1.2 of Essential Reading One, under 'Curriculum Theories'. Ralph W. Tyler's Model which first appeared in 1949 in his book Basic Principles of Curriculum and Instruction is still widely used in many countries having centralized systems of educational decision-making due to its commonsense and clarity. It is also known as 'objectives model', 'rational model', and 'means-ends' or 'ends-means' model.

Tyler said that the curriculum developer should start by deciding what purposes the curriculum is to have and then plan accordingly. He suggested that several ends, which he called goals, educational objectives, and purposes be identified by examining three elements or sources, namely, the learners, life in the community, and subject matter. A summarized form of Tyler's ends-means model is shown in Figure 3.



**Figure 3.**

Tyler's Curriculum Model.

According to Tyler it is necessary to consider what learners need to know, what society thinks should be taught and what subject specialists consider is important to their academic discipline. The content and teaching activities of a curriculum have to be selected and organized only when what is to be taught has been decided. Information regarding learner's needs and wants help educators in motivating the learner to learn.

Since the learner needs to understand the environment, interacting with others is essential. This makes the local community and society at large the learner's learning laboratory. By studying the community and the society, the learner can find problems to solve and ways of solving them.

The purposes or objectives finally selected will be shaped by the educational philosophy and the psychological principles which are considered as important to classroom teaching. Tyler suggests that philosophy and psychology should be used as screens to sieve off the important objectives from the heterogeneous collection of tentative general objectives so as to eliminate the unimportant and contradictory ones.

Tyler's rationale for the curriculum, as described above, is shown diagrammatically in Figure 4.

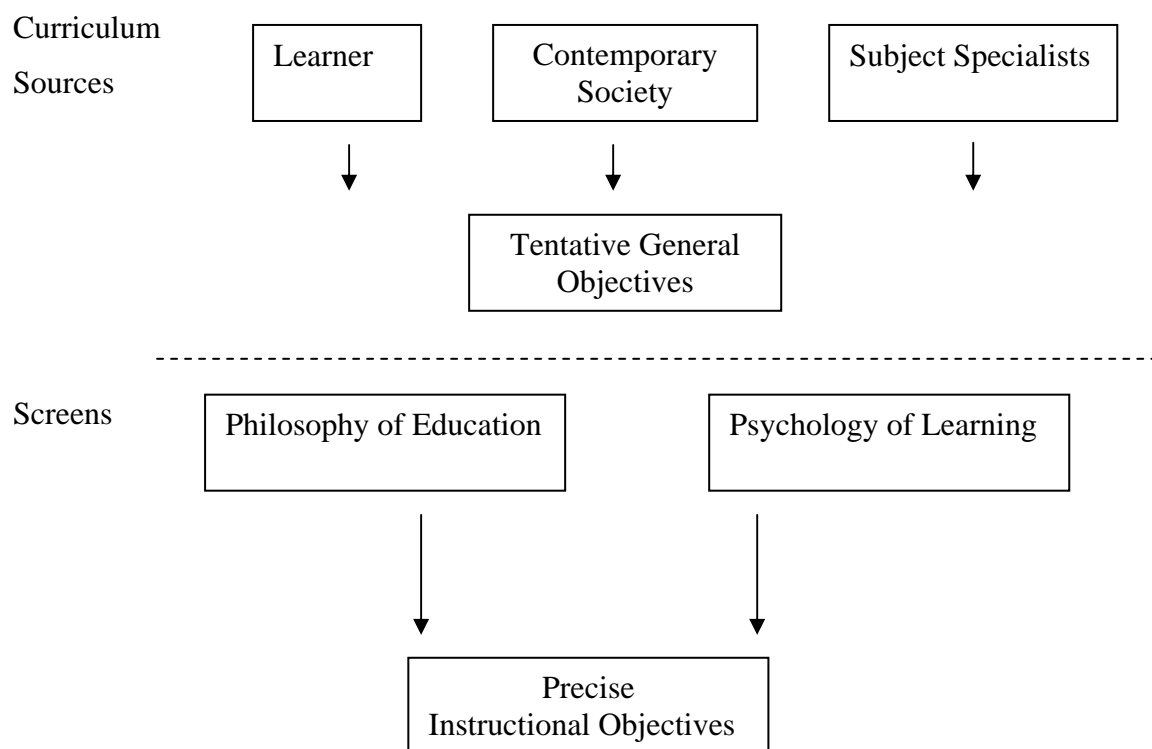


Figure 4. Tyler's Rationale for Curriculum.  
(Marsh, 1992).

Once the precise objectives or intentions of the curriculum are identified, learning experiences which are likely to be useful in attaining these objectives will have to be selected. Learners should be made aware of the behaviours expected of them through these learning experiences and they should have the opportunity to practice the desired behaviours. Next step is to organize the learning experiences for effective instruction. Tyler made two suggestions in this regard: (1) Build learning experiences upon earlier activities (vertical organization or spiral development); (2) Interrelate or integrate learning experiences across subjects (horizontal organization). It is essential to identify major concepts, skills, and values which could be introduced and sequenced again and again in different units in one subject and across different subjects. This reintroduction and resequencing will provide for interrelation or integration of learning experiences across subjects. Tyler stressed that this continuity, sequence, and integration have to be experienced by the learners according to their level of understanding.

Finally, there is the need for evaluating the effectiveness of learning experiences. It is necessary to evaluate throughout a learning unit / segment to see whether the learning experiences have actually achieved the intended purposes or objectives; that is, to find out whether the ‘means’ produced the desired ‘ends’.

The Tyler’s model with the four key questions that curriculum makers have to ask is shown in Figure 5.

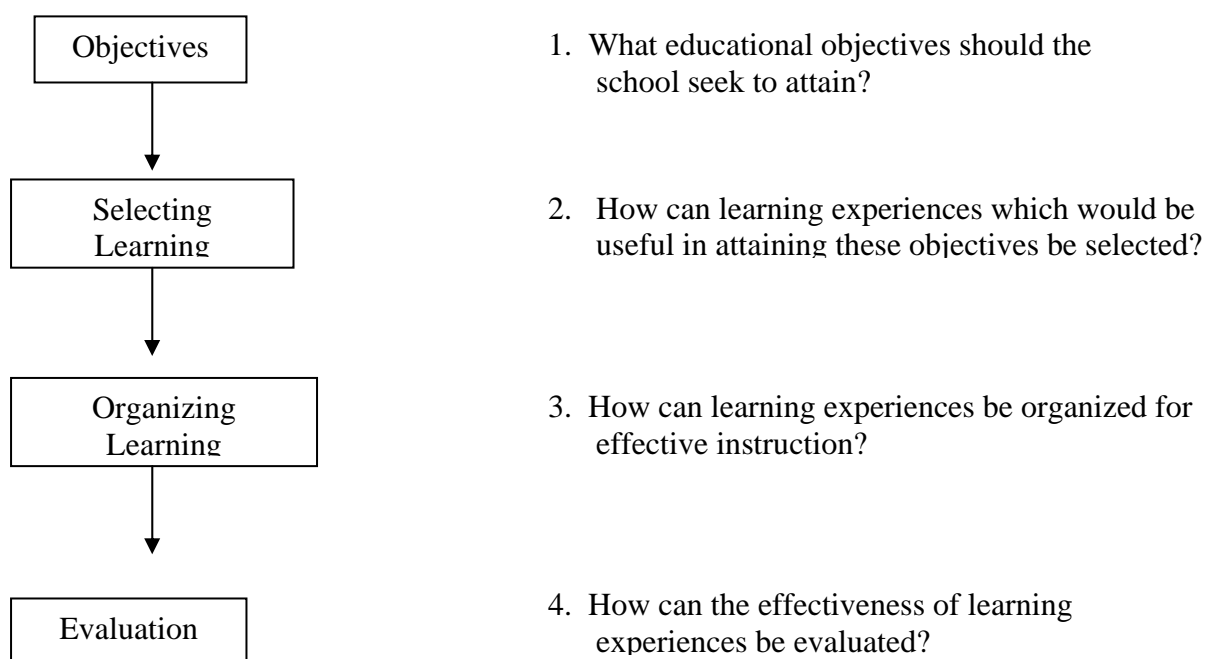


Figure 5. Tyler’s Model for Curriculum Planning.



Tyler's Model can be applied to any subject and any level. It provides a set of logical and rational procedures which are easy to follow. This model was revolutionary at the time (1940s) in its emphasis on 'learner behaviours' and 'learning experiences'. Tyler was heavily influenced by John Dewey, who stressed learning by doing and Jerome Bruner who wrote about the structure of knowledge. Tyler agreed with the view that to master a subject one must understand its underlying structure. One limitation of this model is its concern only with the evaluation of intended instructional objectives ignoring unintended learnings.

Tyler's Curriculum Model represented a return to the earlier analytical aims approach.

### **2.3.2 Taba's Curriculum Model**

Hilda Taba's Curriculum model (Taba, 1962) is referred to as an Inverted Model because it begins in the classroom. Taba's eight-step model extended Tyler's four questions. The eight steps of this model are as follows:

- Step 1. Diagnosing needs, using a needs assessment tool.
- Step 2. Formulating specific objectives, including concepts and attitudes to be learned, ways of thinking to be enforced, and habits and skills to be mastered.
- Step 3. Selecting content, by carefully choosing topics, and writing rationale to support each choice.  
Teachers should be careful to select content and activities according to learners' developmental levels.
- Step 4. Organizing the content, beginning with the simple topics in the list, exploring them in greater depth, and moving to the more difficult ones, noting the essential learner activities.
- Step 5. Selecting learning experiences.
- Step 6. Organizing learning experiences.  
In Steps 5 and 6 it should be ensured that each learning activity has a definite function. The developmental level of the learners should also be looked into. The learning activities must be ordered so that learning becomes continuous and accumulative by connecting new information to previous experiences. Involvement in activities enables learners to see the relevance and meaning in the content they are studying.

Step 7. Evaluating the unit continuously, noting the learners' likes.

Step 8. Checking for balance and sequence.

At this point it is necessary to ensure that:

- the activities provide opportunities to learn how to generalize;
- there is flow in the content sequence;
- there is balance between written and oral work, and research and analysis;
- different forms of expression are possible;
- the organization is open-ended, allowing learners to open up and talk.

Taba's model has several unique strengths. The inverted dimensions of the model involves teachers in its development. This develops in teachers a sense of commitment and ownership and this prepares teachers to implement the model. This model ties theory to practice by bringing together curriculum and instruction.

### **2.3.3 Walker's Naturalistic Model for Curriculum Planning**

D.F.Walker (1972) studied how curriculum planning actually occurs in practice, compared to other approaches which prescribe how curriculum planning should occur. As a participant observer and evaluator, of the Kettering Art Project during the late 1960s in California, for three years Walker was able to isolate important components in the curriculum development process.

Walker's model comprises a three-step sequence of platform – deliberation – design.

According to Walker members of any curriculum development team approach the task with certain beliefs and values. They will have some perceptions of the task, ideas about the key issues, assertions on what is to be prescribed and certain commitments which they are willing to pursue and discuss. Therefore the preliminary step is to provide a basis for, future discussions. Walker used the term 'platform' for this basic step which allows every member of the team to join in, to talk, discuss and even argue. Walker suggests that a typical platform should consist of relatively well formulated and thought out beliefs and also less carefully thought out notions. The beliefs will be of three types, namely,

- i. Conceptions (beliefs about what is existing and what is possible);
- ii. Theories (beliefs about relations between existing entities); and
- iii. Aims (beliefs about what is desirable).

There are two types of notions, namely,

- i. Images (unspecified things which are thought to be desirable), and
- ii. Procedures (courses of action without any specific reason to their desirability).

At this platform stage the individual members are more concerned with establishing their immediate preferences and concerns.

The next stage of the process is called 'deliberation'. This refers to the ongoing pursuit of particular ideas and policies in order to clear away the clashes between alternatives. A variety of alternatives, alternative perceptions, alternative problems and alternative solutions are discussed and formulated at this stage. During this stage the team members are expected to come up with viable solutions through forthright discussion.

The final stage of the model is the design stage where some decisions are taken for action. The design phase is of two types, namely, explicit design and implicit design. All discussions made after the alternatives have been sorted out and the most defensible solutions found belong to the explicit design. Courses of action taken without considering alternatives comprise the implicit design. The culminating activity of the design phase is the production of specific teaching materials.

Walker's naturalistic model is illustrated in Figure 6.

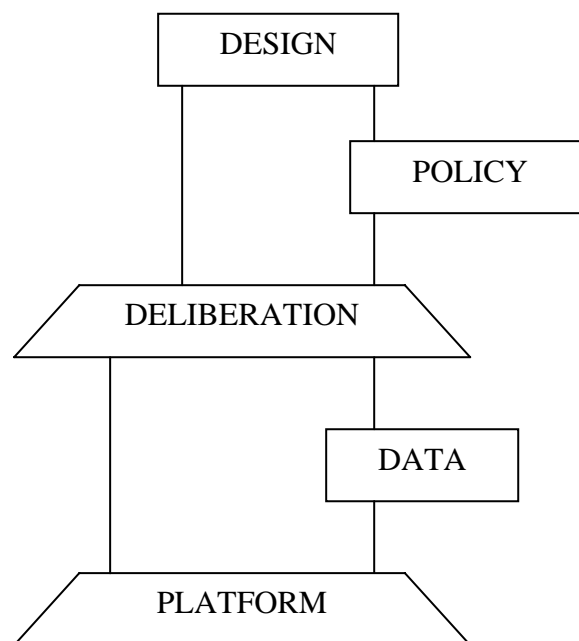


Figure 6. Walker's naturalistic Model of Curriculum Planning.

This model illustrates the actual process of curriculum planning. It emphasizes the need for curriculum planners to engage in long dialogue initially to react to different ‘platforms’ and to involve in ‘deliberation’. Although this model reflects what happens in large-scale curriculum projects, its suitability for small-scale, school-based curriculum planning activities needs to be explored. However, this model has been used at various levels of curriculum development including small-scale projects with pre-service teachers, in-service teachers, and in large-scale programmes.

### 2.3.4 Oliva’s Model for Curriculum Development

P. F. Oliva (1976) introduced the curriculum development model shown in Figure 7 in 1976. His model had to meet three criteria, namely, it had to be simple, comprehensive, and systematic.

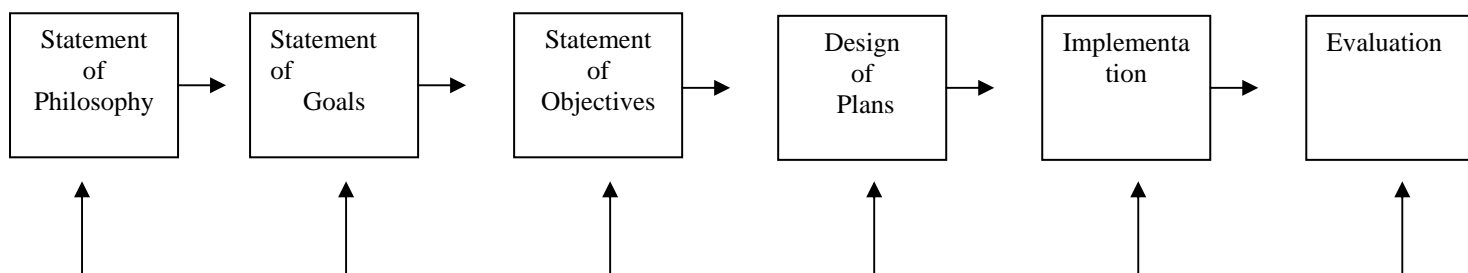


Figure7. Oliva’s (1976) model for curriculum development.

In 1992 Oliva expanded his simplified model of six (6) steps to one with twelve (12) steps in order to provide additional details and show some processes which the simplified model assumes. Twelve components of the expanded model are as follows:

Component I. Statement of Aims, and Philosophical and Psychological Principles.

These aims are based on beliefs about the needs of society and the needs of individuals living in the society. This component incorporates concepts similar to Tyler’s use of philosophy and psychology as “screens”.

Component II. Specification of needs of particular learners, particular community and subject. Needs of learners in particular communities are not always the same as the

general needs of learners throughout the society. Therefore Component II introduces the concepts of needs of particular learners in particular localities.

Component III.            Specification of curriculum goals.

Component IV.            Specification of curriculum objectives.

These goals and objectives will be based on the aims, beliefs, and needs specified in Components I and II.

Component V.            Organization and implementation of the curriculum; Formulation and Establishment of the structure by which the curriculum will be organized.

Component VI.            Specification of instructional goals for each level and subject.

Component VII.            Specification of instructional objectives for each level and subject.

Component VIII.            Selection of instructional strategies for use with learners in the classroom.

Component IX A.            Preliminary selection of evaluation techniques. At this stage, the curriculum planner thinks ahead and begins to consider ways to assess learner achievement.

Component X.            Implementation of instructional strategies. After the learners have been provided with appropriate opportunities to learn in Component X, the planner returns to the problem of selecting techniques for evaluating learner achievement and instructor effectiveness.

Component IX B.            Final selection of Evaluation Techniques.

Component XI.            Evaluation of Instruction

Component XII.            Evaluation of the Curriculum programme.

This model combines a scheme for curriculum development (that is, Components I to V, and XII) and a design for instruction (components VI - XI).

A strength of the Oliva model is its inclusion of foundations. The original model requires a statement of philosophy which is extremely important and is not found in many curriculum models.

### **2.3.5 Macdonald's Curriculum Model**

James B. Macdonald (1965) defined instruction as the social system within which formal teaching and learning take place, and curriculum as the social system that results in a plan of instruction. Macdonald used a Venn diagram to illustrate his Model's parts and their relationships.

(Note: A Venn diagram is a diagrammatic representation related to the concept of 'sets' in Mathematics and named after the Mathematician John Venn.)

Macdonald's Model is illustrated in Figure 8.

**Figure 8. Macdonald's Curriculum Model**  
(Macdonald and Leeper, 1976)

The key elements of the curriculum process, namely, Curriculum, Instruction, Teaching and Learning are represented by the four figures numbered I, II, III and IV respectively.

Macdonald perceived teaching as a personality system (the teacher) acting in a professional role and learning as a personality system (the learner) performing task-related (learning) behaviours. He defined the intersecting parts of the diagram as follows:

- V. Concomitant learning;
- VI. Behaviour modification through teacher feedback;
- VII. In-service experiences;
- VIII. Supervision experiences;
- IX. Learner-teacher planning experiences;
- X. Learner – teacher planning experiences.

Macdonald viewed curriculum as a structural series of intended learning outcomes and therefore the relationships among the model's various elements are essential. Presentation of these relationships is a significant feature of the model.

### **2.3.6 The Zais Model of curriculum**

The simple eclectic model of curriculum developed by R. S. Zais (1976) attempts to depict the principal variables and their relationships which need to be considered by curriculum planners in curriculum construction. This model is not concerned with the process of curriculum construction, development, or implementation or with the design itself. It portrays the components of the curriculum and the principal forces affecting its content and design. Zais model is illustrated in Figure 9 along with its foundations.

Figure 9. Zais Model of Curriculum and its Foundations.

The curriculum here is depicted as a formless entity surrounded by a double line. This indicates that the boundaries of curriculum are not clearly defined and however, it is essentially an integrated entity. The components of the curriculum are aims, goals, objectives, content, learning activities, and evaluation. These components are separated by jagged lines within the double lines to show that all components are interrelated.

The rectangles represent the foundation blocks of the curriculum, namely, Epistemology, Society / Culture, The Individual, and Learning Theory.

The shaded area within the double line linking the four foundation blocks depicts the influence of the curriculum foundations on the curriculum design (that is, the content and organization of curriculum components).

Interrelatedness of all the areas is shown by double arrows. The broad area of the philosophical assumptions supports the four foundations and influences the value judgments made about the foundations.

The significance of this model is that it addresses two of the most important curriculum issues, namely, the nature of the curriculum and the forces that determine its content and organization.

### **2.3.7 Action Research Model of Curriculum Development**

The Action Research Model highlights the need for classroom teachers or teacher educators to take the responsibility for their curriculum development. Advocates of this model suggest that teachers or teacher educators must use the results of their own inquiries to change and improve their practices.

According to M. Thomson (1988) Action Research is depicted as

‘A way of thinking and systematically assessing what is happening in a classroom, or school / institution, implementing action to improve or change a situation or behaviour, monitoring and evaluating the effects of the action with a view to continuing improvement.’



S. Kemmis and R. McTaggart (1984) describe Action Research as

‘a method for practitioners to live with the complexity of real experience, while at the same time, striving for concrete improvement’.

Four fundamental processes or ‘moments’ in ‘Action Research’ model are given below:

1. Develop a plan of action to improve what is already happening.
  - The plan has to be forward looking. It has also to be strategic in order to take risks.
2. Act to implement the plan.
  - This act is deliberate and controlled and it takes place in real time and encounters real constraints. It may involve some negotiations and compromises.
3. Observe the effects of action in the context in which it occurs.
  - This observation is planned and open-minded. It provides the basis for critical self-reflection.
4. Reflect on observed effects as a basis for further planning and a succession of cycles.
  - This reflection recalls action and comprehends the issues and circumstances. It judges whether the effects were desirable.

This curriculum planning model increases self-confidence of teachers and teacher-educators and inculcates a feeling of empowerment in them. It provides for greater school / institution - staff collegiality and greater willingness to experiment. This improves practices and increases understanding of research processes.

For this model to be really implementable the teachers and teacher-educators have to be free to make changes that they might feel are educationally worthwhile.

A distinction needs to be made between Action Research Model and other curriculum models. Action Research Model is really a model for curriculum change. Action research has a micro dimension with individual teachers reflecting on their instructional practice with a view to being more effective.

## **Summary**

We discussed at the beginning of this Essential Reading how a curriculum is developed through the interaction of various sources and influences and the need for a philosophy to guide the process of decision-making involved. Then, different curriculum approaches and designs were presented in brief. Subsequently, a representative sample of curriculum models of different curriculum writers were presented in detail.

## **Objectives**

You are now able to

- i. Identify the key sources or bases for curriculum development;
- ii. Understand the different curriculum approaches and designs; and
- iii. Explain the strengths, weaknesses, limitations, and applications of different curriculum models.

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