

Session 1 Concepts of Curriculum

School is a social institution designed to give formal learning to children. The organization of schooling and further education has long been associated with the idea of a curriculum. School curriculum facilitates the systematic development of the learners' mental capacities,

1.1 Concept, nature and scope of curriculum

- Curriculum
- Concept, nature and scope of curriculum

Curriculum

Word curriculum is derived from Latin word which is the combination of two words Perhaps the most common definition derives from the word's has its origins in the running/chariot tracks of Greece

- Curricula.....race
- Um.....place

As The word curriculum derives from the Latin *currere* meaning 'to run'. This implies (involves) that one of the functions of a curriculum is to provide an outline or design which enables learning to take place.

In education, where the word curriculum has been imported, like in a race, indeed, for many students, the school curriculum is a race to be run, a series of obstacles or hurdles (subjects) to be passed. There are starting points, purpose destinations/targets *program outlines, course syllabi, the paths* and specifications of routes *students follow through*. A good curriculum therefore presupposes good planning

Curricula generally define the learning that is expected to take place during a course or programme of study in terms of knowledge, skills and attitudes, they should specify the main teaching, learning and assessment methods and provide an indication of the learning resources required to support the effective delivery of the course.

Encyclopedia of education research and curriculum

"Curriculum means all those activities and experiences by which it is expected to bring to change in the student's habits and attitude and to give them training in decision making"

In the broadest sense the "curriculum" in ordinarily is used by specialists in the field in two ways:

- 1) To indicate, roughly, a plan for the education of the learners.
- 2) To identify a field of study.

"Curriculum as plan for education of learners usually is referred to as a curriculum".

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In broader sense Curriculum can be defined as sum total of all the experiences a learner go through under the guidance of the school, institution.

The specific and formal knowledge and skills that the learners will acquire from a course/programme constitute a **core curriculum**.

However, there are many others "things" the students acquire incidentally (or "accidentally") that are not planned for and yet are important skills, values or even knowledge in the life of student or user. Examples of unplanned curriculum are many. These can include; communication skills, organizational skills and moral and social etiquettes etc. All this stuff is called the "**hidden curriculum**" and the process of acquiring it is "incidental learning".

The schools must therefore be organized with a well enriched learning environment.

Concept, nature and scope of curriculum

The term concept convey to point out something conceived in the mind, nature mention the processes and functions and scope indicate what knowledge and skills are included in the curriculum in question. Concept, nature and scope of curriculum in education are always changing and developed with time to suit the needs of society

The idea of curriculum is hardly new - but the way we understand it has altered over the years, and there remains considerable dispute as to meaning nature and scope.

Different writers in different times conceptualize and describe nature and scope of curriculum in different ways:

Franklin Bobbit (1918) consider: Curriculum is that series of things which children and youth must do and experience by way of developing abilities to do the things well that make up the affairs of adult life; and to be in all respects what adults should be.

John F. Kerr thinks curriculum as "All the learning which is planned and guided by school whether it is carried on in group and individually inside or outside the school".

Ralph Tyler (1957) describes: The curriculum is all of the learning of students which is planned by and directed by the school to attain its educational goals.

Hilda Taba (1962) explains: "All curricula, no matter what their particular design, are composed of certain elements. A curriculum usually contains a statement of aims and of specific objectives; it indicates some selection and organization of content; it either implies or manifests certain patterns of learning and teaching, whether because the objectives demand them or because the content organization requires them. Finally, it includes a program of evaluation of the outcomes."

Henchey, (1969).express: Curriculum is "the underlying (basic) plan of communication" while instruction is "the substance and form of communication" between teachers and student
Oliver, (1977) give explanation: Curriculum is "the educational program of the school" with attention to the following elements: (1) program of studies, (2) program of experiences, (3) program of services, and (4) the hidden curriculum

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Daniel Tanner, (1980) refers curriculum as “The planned and guided learning experiences and intended learning outcomes, formulated through the systematic reconstruction of knowledge and experiences, under the auspices of the school, for the learners’ continuous and willful growth in personal social competence.”

According to Leith Wood 1981 “Curriculum composes educational Philosophy, values, Objectives, Organizational structure, Teaching strategies, Students experiences, Assessment and Evaluation, and Learning out comes”.

Kelly quoted in 1983 ‘All the learning which is planned and guided by the school, whether it is carried on in groups or individually, inside or outside the school. (See also, Kelly 1999).

Sergiovanni and Starratt (1983) see curriculum as that which the student is supposed to encounter, study, practise and master.

Farrant (1991) recognize curriculum as a set of decisions about what is taught and how it is taught, which determine the general framework within which lessons are planned and learning takes place.

Marsh & Willis, 2003 describe “Curriculum is an interrelated set of plans and activities that a student experiences under the guidance of the school.”

According to Schiller Curriculum is “A vehicle in which a “school” achieves its purpose (formal, informal-intended /unintended) by allowing students to question reasoning, show enthusiasm and filter out essential knowledge

Summary

Oliva (1997).has narrated the summary of Concept, nature and scope of curriculum in multiple definitions of curriculum,

Curriculum is:

- That which is taught in schools
- A set of subjects.
- Content
- A program of studies.
- A set of materials
- A sequence of courses.
- A set of performance objectives
- A course of study
- Is everything that goes on within the school, including extra-class activities, guidance, and interpersonal relationships.
- Everything that is planned by school personnel.
- A series of experiences undergone by learners in a school.
- That which an individual learner experiences as a result of schooling.

Session: 2

Difference among curriculum, syllabus, course and educational program

- A complete body of prescribed studies constituting curriculum.
- A syllabus is simply an outline and time line of a particular course.
- Course is defined as a list of topics and subtopics given in a subject.
- A set of instructions to run an educational system or organization.

Curriculum is the set of courses, and their content, offered at a school or university. As an idea, curriculum stems from the Latin word for race course, referring to the course of deeds and experiences through which children grow to become mature adults. A curriculum is more than a syllabus. A syllabus describes the content of a programme and can be seen as one part of a curriculum. Most curricula operate within organizational and societal constraints.

Syllabus

A syllabus is derived from the curriculum objectives. A curriculum is general, while a syllabus is more specific and focused on one subject. A syllabus (from Latin syllabus "list" probably of Greek origin), generally, a syllabus is defined as "a course of study offered by a learning institution in a specific period of time"

- (Debin and Olshtain, 1986) and Other authorities have considered a syllabus to be a collection of topics on the same subject matter that are required to meet the course objectives.
- Farrant (1980: 173) defined a syllabus as "a series of statements of what is to be learned".
- "Syllabus mean a plan that states exactly what students at a school or college should learn in a particular subject"
- **Syllabus is defined** as a course of study in the subject or area of study. This is the line of the content to be studied by a student at a specific level of education. syllabus is simply an out line and time line of the particular course. It will typically give a brief over view of the course objectives, course expectation list reading assignments, homework deadlines and exam dates.
- Curriculum and syllabus are often fused, and usually given to each student on the first day of a college course and a student is expected to know what the syllabus through out the course is. It sometimes includes a small number of general aims & objectives; so that the objectives and the means of obtaining them are clear.
- A syllabus usually contains specific information about the course, such as information on how, where and when to contact the lecturer and teaching assistants; an outline of what will be covered in the course; a schedule of test dates and the due dates for assignments; the grading policy for the course; specific classroom rules; etc.

Within many courses concluding in an exam, syllabi are used to ensure consistency between schools and that all teachers know what must be taught and what is not required (extraneous). Exams can only test based on information include in the syllabus.

The syllabus is important because it:

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- The syllabus lists concepts to be developed and topics covered at each level of education. Guides the teacher on topics and content level, from the syllabus, the teacher can determine what topics are to be taught at each level: class, grade or form.
- Provide curriculum philosophy and course goals. The syllabus outlines terminal objectives that determine the expected outcomes; It gives the teacher the basis for evaluation, since these objectives specify the expected achievements in skills, knowledge and attitudes at the end of the course.

Syllabus allows the student to work their schedule for their own maximum efficiency and effectiveness.

- The syllabus outlines the learning experiences and provides notes on the subject to be learned. These help the teacher determine the depth of the content and the expected skills to be developed. The teacher can easily prepare materials needed to deliver lessons.
- The syllabus provides strategies and means of evaluating the learners' understanding of the subject. In some instances, the syllabus may suggest the skills to be evaluated and the weighting of each skill (for example, practical skills 40% and knowledge 60%). The syllabus specifies the number of examination papers and their nature, as in the following:

Three papers will be set in this subject:

- Paper 1: Theory – multiple-choice questions
- Paper 2: Theory – structured and long-answer questions
- Paper 3: Alternative to practical's

Course:

Course means that body of organization content & experiences which is offered within a given period of time". Generally course is a subject taught within a program, for example, algebra within mathematics, physics within science, and elementary school curriculum within Bed. In each subject area, there are certain topics or a list of topics and subtopics given in a subject that should be included at each level. These topics are listed so that the teacher knows which subject matter to teach and the level at which to teach it.

The common elements found in most types of the syllabus are described below.

- Course Objectives outline the learning that pupils should be able to demonstrate at the end of the course.

Generally, these objectives concern themselves with the skills, knowledge and attitudes that are to be developed.

They are subject-specific, unlike those in the curriculum.

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Different Aspects of Course

- **Book:** A course that used regularly during a set of lesson on a particular subject(text book)
- **Learning skill:** A period of a time in which some one is taught a particular skill.
- **Lesson:** Portion of a book to be learnt doctrine included, percept a direction.

Educational Program

Educational Program means each subject area in a school's curriculums, for example, mathematics, science, language arts, social studies, and career and technical programs.

A specific educational program comprises philosophy, goals, objectives, student competencies, learning experiences, instructional strategies, resources and assessments that additionally, represents an articulation of what students should know and be able to do and supports teachers in knowing how to achieve these goals. It:

- establishes a clear philosophy and set of overarching goals that guide the entire program and the decisions that affect each aspect of the program;
- establishes sequences both within and between levels and assures a coherent and articulated progression from grade to grade;
- establishes grade-level or course specific student performance standards
- outlines a basic framework for what to do, how to do it, when to do it and how to know if it has been achieved;
- allows for flexibility and encourages experimentation and innovation within an overall structure;
- promotes interdisciplinary approaches and the integration of curricula when appropriate;
- suggests methods of assessing the achievement of the program's goals and objectives;
- provides a means for its own ongoing revision and improvement; and
- provides direction for procurement of human, material and fiscal resources to implement the program.

Elements of Educational Program

- | | |
|------------------------------|------------------------|
| 1. Objectives | 2. Learning +Teaching. |
| 3. Teaching Methods | 4. Examinations |
| 5. Co-curricular Activities. | 6. Contact Society |
| 7. Subject Wise Societies | 8. Literary Society |

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9. Character + Moral Of Teaching

10. Festivals

Curriculum	Syllabus	Course
Curriculum is the overall content, taught in an educational system or a course	Syllabus describes the summary of topics covered or units like Chapters (Baabs) in any subject	Course is a path, sequence, development or evolution
Curriculum actually contains all the learning materials: worksheets, slides and exams	Syllabus can contain outlines, objectives and time required	A set of classes or a plan of study on a particular subject, usually leading to an exam or qualification
Curriculum is a Latin term.	Syllabus is a Greek term.	
Curriculum is a Course.	Syllabus is a subject.	
Prescriptive	Descriptive	
Government or the administration of school, college or institute	Exam board	A course is a set of lectures that can consist of any type of content (e.g. video, documents, presentations etc).
Same for all teachers	Varies from teacher to teacher	

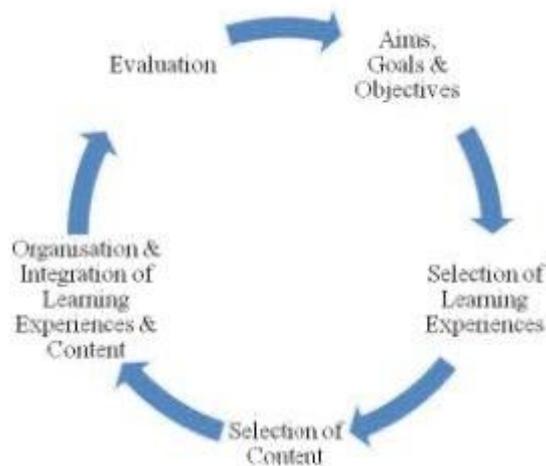
Session: 3-4 Elements of the curriculum

Ralph W. Tyler- 1949 explain these element in his book, “Basic Principles of Curriculum & Instruction” as the four fundamental questions which must be answered in developing any curriculum and plan of instruction are related to

1. Educational purposes/ objectives
2. Educational experiences
3. Organizing those experiences
4. Attaining those purposes

When we reflect on these questions we are likely to arrive at the 4 major elements of curriculum development i.e.

- a. Selection of aims, goals and objectives;
- b. Selection of learning experiences and content;
- c. Organization of learning experiences;
- d. Evaluation of the extent to which the objectives have been achieved.



Although there are different emphasis and priorities most curriculum planners will use specific element, even if they are used in a different order. They include:

What? (Objectives/outcomes)

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How? (Use of specific learning activities / Content)

When? (Organizing/sequencing learning activities /Methodology)

So what? (Checking on what has been learnt/ Evaluation)

According to Hilda Taba

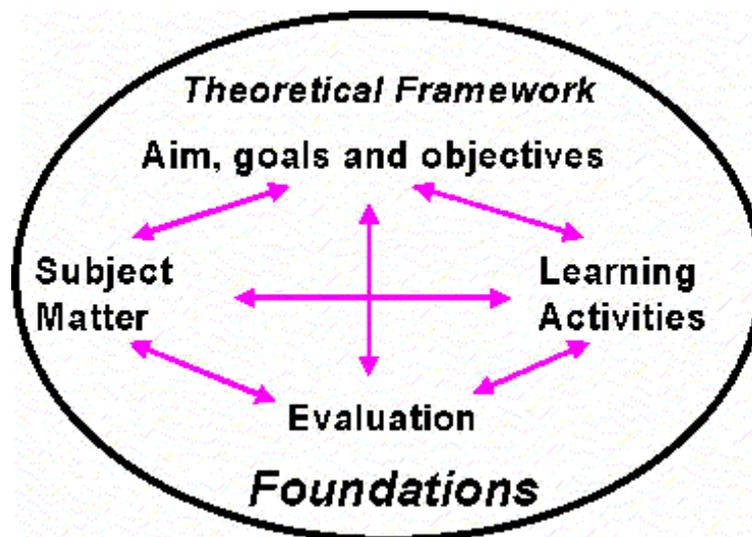
Curriculum designs major concerns are the nature and arrangement of the four basic curriculum components:

- i objective,
- ii content,
- iii method
- iv evaluation

The interrelatedness of the elements of the curriculum can be illustrated as follows:

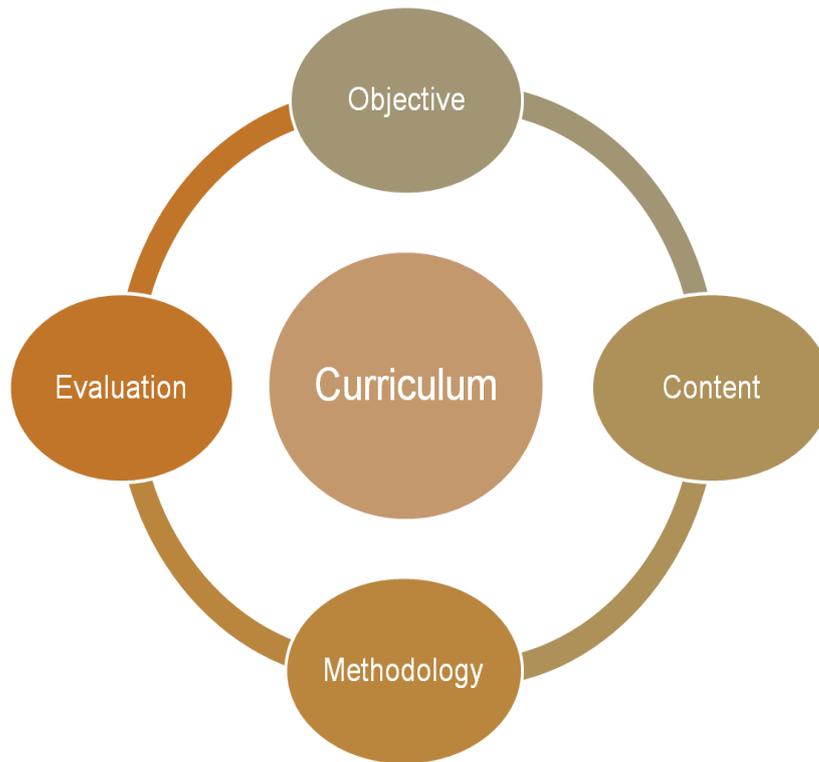
Curriculum Design

- Arrangement of curriculum elements into a substantive entity.
- Basic curriculum components:
 - Aim, goals, and objectives
 - Subject matter
 - Learning experiences
 - Evaluation



- Emphasis on different components shapes the design of the curriculum.
- Taba believes that most curriculum lack balance because -
 - the components are poorly defined, or
 - they not considered within a theoretical framework
- When curriculum are planned those who construct the curriculum may place differing emphases on these components parts.

Usually more emphasis is placed on the subject matter



i) Objective –

- Specify desired behaviors
- Content is outlined: What the learner will know, do or feel (believe)
- Materials are selected
- Instructional procedures are developed
- How Measured : Tests and exams are prepared

Educational Objectives Facilitate the Learner, teacher and school, sharing the objective with learners leads to better learning

An objective is defined as intent communicated by a statement describing a proposed change in the learner (Mager, 1992).

According to Gallagher and Smith (1989) Educational Objectives are properly constructed educational objectives representing relatively specific statements about what students would learn at the end of a lesson.

Various Alternative Names for Educational Objectives

- Specific Learning Objectives
- Students' Learning Outcomes
- Enabling Objectives

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- Behavioral Objectives
- Instructional Objectives
- Educational Intents
- Educational Aims

Effective and efficient teaching is impossible without devising educational objectives prior to, not only teaching, but starting to prepare for that! We cannot forget that teaching is both an art and a science; so, no matter how gifted a teacher might be, there will be no effective learning without specific objectives.

The objectives of a curriculum:

- based on the social aspirations of society
- Outlines the goals and aims of the program
- Expressed as goals and objectives.

There are three categories of goals and objectives:

- **Cognitive:** Referring to intellectual tasks
- **Psychomotor:** Referring to muscular skills
- **Affective:** Referring to feeling and emotions

Some characteristics of effective learning objectives reflect in abbreviation 'SMART':

- Specific
- Measurable
- Achievable
- Realistic/Result-oriented
- Time framed

Functions of Educational Objectives

- Help in building an active relationship between the teacher and the learner
- Make teaching more directed and organized
- Help avoiding unnecessary repetitions

Four parts of an Educational Objective

- It should have an action verb.
- It should include a specification of the content
- It should contain a specification of the support material
- It should contain a specification of the degree of learning

Examples

- The learner will be able to retrieve information using database searches by identifying and acquiring full-text documents available from the www.
- The students will be able to write/label all major parts of eye using a diagram/chart
- The students will be able to underline parts of speech in the given sentences using the handout/text provided.

The students will be able to derive the rectangular components of a vector using trigonometric ratios for the angles of 300, 450, and 600

ii Content/subject matter of the curriculum – Curriculum content is the second major category of curricular elements. It includes the knowledge, skills, and attitudes (values) which educators are interested in conveying to learners.

- “It plays an important role in process of curriculum”
- ROBERT ZAIS: “Content contains and values, culture, social needs, festivals, history and present needs”
- Content is prepared according to objectives.

As the foundations of the curriculum determine what and why to teach, the content focuses upon the specific information to be transmitted and the means of transmission. In this category are the scope, sequence and unit specifications. The unit specifications may be further divided into goals, rationales, objectives, activities, and references. In all, the content elements provide direction for organizing curriculum content and for transmitting it to learners. At this point, each of the elements found within the curriculum content category will be discussed.

Scope and sequence are vital elements in structuring any curriculum in the education/training program. These elements establish content guidelines for the curriculum development and implementation processes. The use of a scope and sequence provides an effective format for organizing learning experiences for both curriculum developers and implementers.

iii Teaching Methods – Teaching methods are planned according to specific objectives and available resources content “By changing contents and objective teaching method will also change”

Collins Reference English Dictionary defines method as “techniques of doing something”, while Longman Dictionary of Contemporary English defines it as “a planned way of doing something”.

The two definitions are applicable to teaching as an activity. In teaching methodologies refer to those techniques and strategies used by teachers in their efforts to facilitate student learning.

The methodologies teachers commonly use are:

- lecturing,

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- demonstration,
 - illustrating,
 - experimentation,
 - inquiry,
 - role playing,
 - observation,
 - dramatisation, and
 - projects and research.
- Flexible teaching methods facilitate learning. Lecture, reading, discussion, demonstration...
 - For Skills: instruction, demonstration, experience/practice
 - For Attitudes / Behaviors: demonstration, modeling, mentoring, reflection

Learning experiences can take place when one or combinations of these methods are employed by a teacher during a teaching and learning interaction. There is no teaching methodology that, on its own, makes students learn. Methodologies are only approaches that teachers use to capture students' interest and motivate them to learn the information provided.

iv) Evaluation – Evaluation is the process of examining a program or process to determine what's working, what's not, and why.

Evaluation determines the value of programs and acts as blueprints for judgment and improvement.

- “It is a process by which we want to know to what extent the objectives have been achieved” To what extent teaching method was successful and either content was related to the objective or not.
- Evaluation is a process or cluster of processes that people perform in order to gather data that will enable them to decide whether to accept change, or eliminate something - the curriculum in general or an educational textbook in particular.
- Curriculum evaluation is a continuous process for collecting information about all the elements and outcomes of the curriculum to help arrive at an understanding of the extent to which they have been achieved and subsequently take decisions to improve their efficacy.

After the teacher has sequenced the topics, outlined the concepts, specified the learning objectives, identified activities and materials to be used and taught the lesson, it is important to determine whether the instructional and learning intentions have been met. The teacher needs to prepare some means of evaluating materials, learners and methods used in teaching.

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Guided by the objectives given, it should be easy to make these tests and exercises by basing them on intended outcomes.

A record of what happens during teaching should be written under the assessment and evaluation column. Continuous assessment gives the teacher a clear picture of the progress the learners are making. This is very important in teaching

Purposes of curriculum evaluation

- To ensure teaching is meeting students' learning needs
- To identify areas where teaching can be improved
- To inform the allocation of faculty resources
- To provide feedback and encouragement for teachers
- To support application for promotion by teacher
- To identify what is valued by health profession schools
- To facilitate development of curriculum

Types of curriculum evaluation

Evaluations are normally divided into two broad categories: formative and summative.

Formative evaluation is a method of judging the worth of a program while the program activities are forming (in progress). It focuses on the process during the development of the program (To improve the quality). Formative evaluation is also useful in analyzing learning material, student learning and achievement, and teacher effectiveness.

Formative evaluations permit the designers, learners, and instructors to monitor how well the instructional goals and objectives are being met. Its main purpose is to catch deficiencies so that the proper learning interventions can take place, which allows the learners to master the required skills and knowledge.

Scriven, (1991) put in plain words, "Formative evaluation is typically conducted during the development or improvement of a program or product (or person, and so on) and it is conducted, often more than once, for in-house staff of the program with the intent to improve". Weston, Mc Alpine, and Bordonaro(1995) describe "the purpose of formative evaluation is to validate or ensure that the goals of the instruction are being achieved and to improve the instruction, if necessary, by means of identification and subsequent remediation of problematic aspects".

According to Worthen, Sanders, and Fitzpatrick, (1997)"Formative evaluation is conducted to provide program staff evaluative information useful in improving the program".

Robert Stakes simply states, "When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative."

Wally Guyot (1978) clarify "Formative evaluation is primarily a building process which accumulates a series of components of new materials, skills, and problems into an ultimate meaningful whole".

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The purpose of formative evaluation is to

- Help students become aware of areas of need
- help students along the way, ongoing
- give Proof of learning and growth
- give Feedback helps create better product/project
- provide Opportunity to test depth of understanding
- Helps to define lesson design and performance
- Helps teachers determine what to reteach
- Allows for natural adult connections
- Helps to share the workload
- Checkpoint for integration

Summative evaluation: at its conclusion (To prove the quality)

"Summative evaluation is done at the conclusion of an activity or plan to determine its effectiveness"
Thesaurus of ERIC Descriptors (p. 299)

Summative evaluation is typically quantitative, using numeric scores or letter, grades to assess learner achievement. <http://jan.ucc.nau>.

The purpose of Summative evaluation is to

- Provide information on the product's efficacy (its ability to do what it was designed to do). For example, did the learners learn what they were supposed to learn after using the instructional module?
- In a sense, it lets the learner know "how they did," but more importantly, by looking at how the learner's did,
- It helps you know whether the product teaches what it is supposed to teach.
- Summative evaluation is typically quantitative, using numeric scores or letter grades to assess learner achievement.

Session: 5 Stages of Curriculum Development

Once we understood the basic meaning of curriculum through varied definitions proposed by educationists, it is apt to understand the design of curriculum. It is essential to know the basic elements and their relationships. There is no consensus on these elements; however, the following three elements as described by Tyler are frequently utilized:

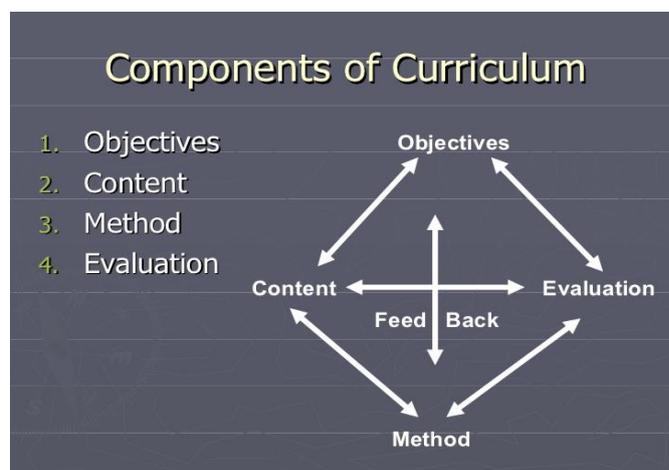
- Learning experiences
- Skills
- Values and ideas

For taking an appropriate decision, the necessary and major elements need to be considered in the process of curriculum development. The decisions are related to the following:

1. Aims and objectives
2. Content
3. Learning experiences
4. Evaluation

Different designs of curriculum consider these elements but not in balance, for example subject-centric curriculum or experience-centric curriculum. The scope of the elements also varies as per context and requirement. An effective design clearly indicates the basis of selection of the various elements and the source from which these criteria are derived. It should further distinguish which criteria are applicable to which element. For instant, the design should make it clear whether the objectives are derived from values, culture, experiences etc. based on which the choice is made about the content and its organization. Any gap between theories and practice will make the design element defective. With changing cultural, social, academic, information technology requirements it becomes imperative to revisit curriculum periodically. Based on the discussed ideas we now focus on the relationship between the components of curriculum.

The diagrammatic representation of the discussion is presented below:



The design always depends on the pattern of curriculum that is planned; all the principles and criteria have equal significance in designing a curriculum.

Stages of Curriculum

In developing a teaching/learning unit or an integrated curriculum, varied decisions are made to develop a realistic curriculum by incorporating all the principles of good curriculum. The methodology to plan either a unit or total curriculum is to break down the systematic steps to ensure an orderly thinking, to make possible a systematic study of the elements that compare such a plan, and to provide for a precise and careful study and application of the relevant principles and facts.

According to Hilda Tuba, the steps involved in developing curriculum are as follows:

1. Diagnosing needs
2. Formulating specific objectives
3. Selecting content
4. Organizing content
5. Selecting learning experiences
6. Organizing learning experiences
7. Evaluating
8. Checking for balance and sequence

Step 1: Diagnosing Needs

Before planning the curriculum, diagnosis helps in general analysis of problems, conditions and difficulties. The purpose is to generate a new emphasis and new ideas about the curriculum, by knowing thoroughly from various sources such as students' cumulative records, teachers' recording, parents' interviews, learners' abilities and their IQ-Intelligence Quotient level. This kind of analysis of various aspects would lead to come out with a new conception of curriculum. Diagnosis leads to understand the prime needs at different stages of curriculum.

Step 2: Formulating Specific Objectives

The above diagnosis will provide some clues to formulate necessary objectives and lead to generate richer learning. The objectives should be comprehensive and include the following:

1. Concepts or ideas to be learnt
- 2 Attitudes, sensitivities and feelings to be developed
3. Ways of thinking to be reinforced, strengthened or initiated
4. Habits and skills to be mastered

Based on the diagnosis, the specific objectives are related to the concepts and ideas necessary to learn at this stage, particular aspect of thinking, attitudes, skills and so on.

Step 3: Selecting the Contents

Based on the diagnosis of the needs and tentative identification of objectives, it is much easier to go for the content selection. The objectives and needs provide a basic idea and guidance to select the relevant content. While selecting the content, the following need to be planned meticulously:

The first task is to select the relevant topics through which the formulated objectives can be achieved unit by unit; the topics to be covered under each subject have to be finalized. Then the idea needs to pay attention to incorporate in to the broad contents, the specific contents and areas to be included in the curriculum.

Step 4: Organizing the content

Once the content is finalized, the content has to be organized systematically by keeping in view the following:

- Sequential order
- Concrete to abstract
- Simple to complex
- Know to unknown
- Immediate to remote
- Easy to difficult

In other words, it should follow inductive logical arrangement of the content and a psychological sequence. There should be connection between ideas, facts and relationships.

Steps 5 and 6: Selecting and Organizing Learning Experiences

With the content in hand, it is easy to plan for learning experience or activities. The criteria with which the content is drawn should provide/plan/visualize what students need to experience in order to acquire certain behavioral competencies and sequence of the experiences. Care must be taken to include a variety of learning_ reading, writing, observing, analyzing, discussing, tabulating, painting and absorption.

Step 7: Evaluating

As we know evaluation is determining the objectives, diagnosis or establishment of baseline for learning and appraising progress and changes, there are varied approaches and methods of evaluation to determine progress of learners.

Step 8: Checking for Balance and Sequence

After completing the whole curriculum, it is necessary to ensure the overall consistency among its parts. Every aspect need to be checked carefully to ensure if the core ideas are reflected in the content, suitable learning experiences are planned and the overall achievement of objectives are laid for overall progress of the curriculum.

Session: 6-7

Using Bloom's Taxonomy to Write Effective Learning Objectives

Learning outcomes of the session

Reading this unit, the student will be able to

- Understand the concept of aims, goals and objectives
- Understand the blooms taxonomy of educational objectives
- Employ the NCERT taxonomy of instructional objectives
- Write instructional objectives as well as specification accurately while planning the lesson

Aims

“Curriculum aims are statement that describes expected life outcomes based on value schema or philosophy.”

Characteristics of Aims

- Highlight major concern
- Broad and long term
- Provide direction to education system
- Not measureable
- Based on theories
- Relate to whole life
- Not directly relate to school or classroom outcomes

Goals

“The end product of Educational system that is shaped and molded by control aims is called goals.”

- Milestones in the way of educational programmed
- Provide direction to education system
- Cover all the activities of school
- Specific and attainable
- Broad but not too much as aims
- Derived from aims and interpret aims

Objectives

Objectives provide clear and detailed specification of each goal in term of knowledge, skills, values, ideas and appreciations.”

- Helpful in subject or content selection
- Provide guidance to the teacher by identifying the abilities of students
- More specified than goals
- Short term
- Helpful in planning & evaluation of the teaching process
- Observable and measurable
- Practical and achievable
- Helpful in vividness, clarity and interpretation of the aims

Instructional Objectives

Education is a process of bringing desirable behavioral changes in the individuals. It helps the individuals to identify their capabilities and potential. Classroom instructions and activities are the gate way of this process. Hence a teacher who deals with any subject should clearly plan his objectives of a particular instruction. Pre-determined learning outcome of an instruction can be called as instructional objectives. More clearly, Instructional objectives are the specific or immediate goal which is obtainable as a result of instruction or through classroom interaction. This is considered as the target of a teacher for a specific lesson or a topic. Learning/ teaching outcomes of a classroom is designed by the instructional objectives. Without formulating instructional objectives instruction become aimless or target less as well as wastage of time and effort of both teachers and students. Instructional objectives should be planned to develop different domains of the learner. Discussion on Blooms taxonomy is necessary to understand the different domains of the learner.

Blooms Taxonomy of Educational Objectives

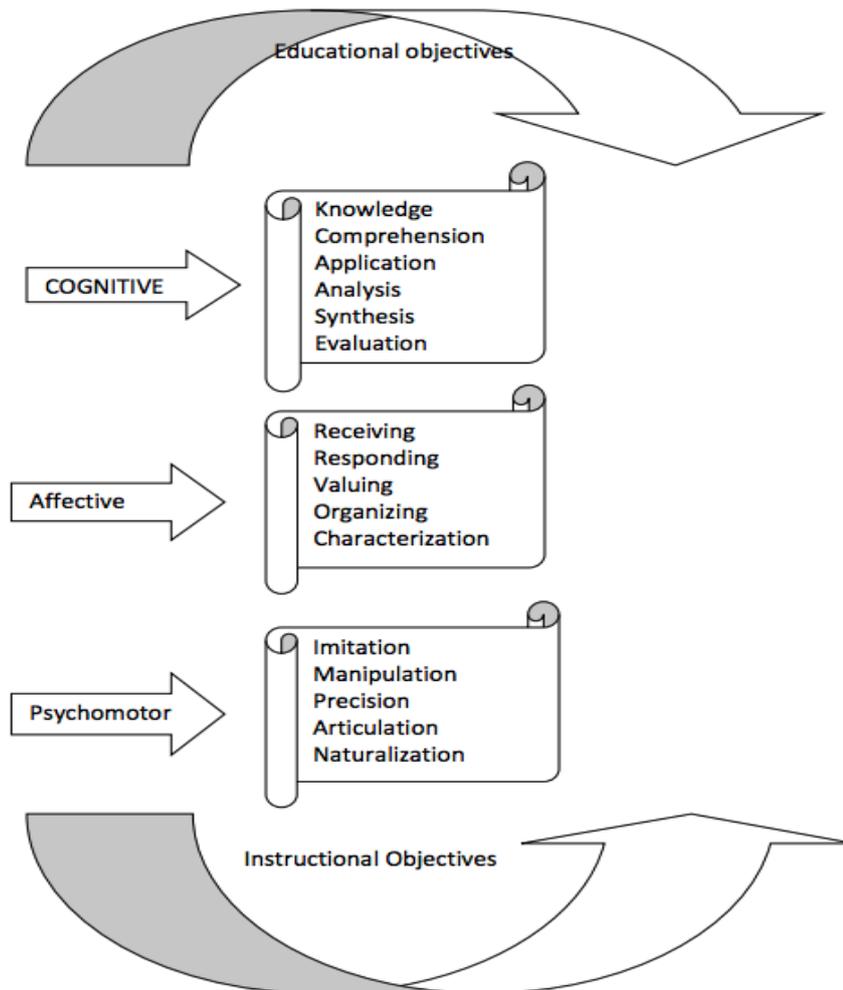
The word taxonomy derived from the Greek word 'taxis' which means systematic classification. Prof. Benjamin S Bloom and his associate, University of Chicago developed and classified the domains of educational objectives. Bloom (1956) presented his taxonomy related to cognitive domain giving emphasis to the hierarchy of cognitive process in attaining knowledge and development of thinking. Later Krathwhol (1964) introduced affective domain and Simpson (1966) developed psychomotor domain. They described the hierarchical development of the three domains of the learner through instruction. This classification objective is known as Blooms taxonomy of educational objectives.

Classification of Blooms taxonomy

1. Cognitive domain- Knowledge field
2. Affective domain- feeling field
3. Psychomotor domain-doing field

Every educational activity should be planned to develop all this domain of the learner. Hence these three domains are mutually interrelated and interdependent also.

Concept map of Blooms Taxonomy



Instructional Objectives in Cognitive Domain

The cognitive domain deals with the intellectual aspect of cognition. It concerned with sensation, perception and application of knowledge. The hierarchical development of cognitive domain is discussed below.

Knowledge

Acquisition of knowledge is the lowest level in the cognitive domain. It includes the ability of students to recall and remember the information learned in the classrooms. Recall and recognition are the specification of this instructional objective.

Comprehension

It is the second level of cognitive domain. It is the meaningful recall and recognition of the learned content. Here the learner could understand and explain what he learned in the

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classroom as his own language. Identifying relations, classification of objects, explanations, comparisons, translation etc are the specification of this level.

Application

In third level the learners are able to apply or use the knowledge which is acquired and comprehended during the first two levels. It is the ability to apply the acquired knowledge through instruction in real life situations. Establishing new relationship, formulating hypothesis, predictions are the some specification of this level.

Analysis

Analysis is the meaningful breakdown of the materials into its various components and to identify the interrelationship between the elements and find out how they are organized and related. Specification of this level includes the analysis of elements, analysis of relationship, analysis of organizational principles.

Synthesis

Synthesis is the mental ability of the learner to integrate the acquired, comprehended, applied and analyzed knowledge in to a comprehensive whole. It involves the ability to give a new shape or structure to statements or procedures.

Evaluation

This is the highest level of cognitive domain. Students could evaluate an object, person, a theory or a principle if only he is par with all other lower hierarchy in the cognitive domain. It is the ability to judge a value of a material, aspects, methods, principles , theory, philosophy and so forth for a given purposes. At this level s/he could perform personal viewpoint about the information s/he synthesized.

Instructional Objectives in Affective Domain

Affective domain is related with the development of heart and mind of the child. It includes the areas of emotions, feelings, interest, attitude, appreciation and values. The teacher should be given emphasis to correlate the development of cognitive domain with affective domain. A person who studied the Gandhian principles, civic right and duties without developing his affective domain is worthless for the country as well as society. Hence the teacher should ensure the development of affective domain in his instructional objectives of the classroom instruction. Bloom and Krathwohl (1964) introduced the following hierarchy for affective domain.

Receiving

In the basic level the learner is sensitized to the existence of a certain phenomena and stimuli. s/he is willing to receive the information whole heartedly by exhibiting awareness on the stimuli and become conscious on particular person, principle, philosophy, incidents etc. For example students are interestingly listening to Gandhian principles.

Responding

Effective reception prepares the learner to respond seriously. As result of receiving some good message from the first hierarchy, the learner tries to respond to the situation positively. For example students show kindness towards elders and weaker people, hold honest behaviour in day to day life situations etc.

Valuing

By responding in good ways, the students set guidelines for their behavior. Accepting values, preference for values, commitment to values are the important behavioural changes in this level. For example students develop positive attitude towards nonviolent behavior, truthfulness, honesty etc.

Organization

Student builds a system of value at this level. Value conflict and value crisis are resolved. Through organizing different values students are able to develop their own code of conduct and standard of public life in the society. For example Pupil identifies the inseparability of the values like nonviolence, truthfulness and tolerance of Indian tradition. They show dislike towards corruption and violence in the country and think against to work.

Characterization

This is the highest level of internalization process. Values are imbibed and forms part of the life style of the individual. For example the nonviolence value becomes the philosophy of the individual. They will not be ready to compromise on their philosophy at any stage as well as, ready to work for justice even though they are alone their way.

Instructional Objective for Psychomotor Domain

Psychomotor domain deals with the action or performance level. This domain includes muscular action and neuromuscular coordination. Educational objectives of this domain aim to developing proficiency in performing certain acts. Simpson (1966) presented the psychomotor domain as follows.

Perception

Perception is the first level in psychomotor domain. It consist the process of becoming aware of objects, qualities or relation through sense organs.

Set

In this second hierarchy students make preparatory adjustment of readiness for a particular kind of action or experience. Mental as well as physical set for action is performed here.

Guided response

It is the overt behavioral act of a student under the guidance of the teacher. Students initially perform an act which is perceived and set through earlier levels. It includes imitation of teachers, elders, parents, and trial and error activities in attaining writing, reading skill etc. For example; Student imitates the writing style of his teacher to write letter 'A' and repeat many times to learn how to write letter 'A'.

Mechanism

In this level student show progress in performing the act through imitation and trial and error. Student learned to write letter 'A' by imitating his teacher and through trial and error activity. Now s/he can write letter 'A' at his/her will. Here learned response has become habitual. It is a micro analysis in which each step in the mechanism is properly examined and drilled.

Complex Overt Response

In this level the student can perform a complex motor act which required a complex movement pattern. In this hierarchy students attain a high degree of skill and the act can be carried out smoothly and efficiently. In this level students could perform the act without any hesitation. Fine muscular coordination and great deal of ease in performing act are the peculiarity of this level. Here student able to write many word easily and simply within a short period of time, ability to run, walk, jump and talk easily are also comes under this category.

Adaptation and Originating

This is the highest level. Here student are adapted with the ability of doing an act which is acquired through above steps. Now spontaneously s/he can perform the act with accuracy. More over s/he is able to originate a new pattern of action or style in doing the activity.

Dave Classification-Psychomotor Domain

Dave (1969), from NCERT also contributed taxonomy for psychomotor domain which is discussed below.

Imitation

It is simply an imitation act of a student who energized through cognitive as well as affective domain development. It means that the student who learned how to write (cognitive domain), willing to write (affective domain) may imitate to write to get the ability to write (psychomotor domain).

Manipulation

This level student tries to do the imitated activity in various ways through repetition. Here students try many ways and styles to perform the activity and select appropriate one which is suitable and convenient to him/her.

Precision

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In this level student attain speed, accuracy, proportion, exactness, neatness in a performing the act which is acquired through above two levels.

Articulation

Here the student able to handle many actions in unison. This includes coordination, sequence and harmony among acts.

Naturalization

This is the highest level in psychomotor domain. Here student attain the proficiency in performing the particular task. The action becomes automatic with least physic as well as mental energy.

Criteria for Writing Instructional Objective

The following criteria should be kept in mind by the teacher while setting and writing the instruction objectives.

1. Specification of the learner/Performer

Specify the learner such as pupil, class, group etc

2. Learner performance

Illustrate the learners' performance in classroom interaction, for example, students are able to understand, apply, identify, and justify etc. it also termed as action verb.

3. Learning content and condition

Clearly mention the content of study, for example, the pupil able to justify the nonviolence principle of Gandhi

Besides the above, the teacher should set target of a minimum expected level performance of the learner in quantitatively and qualitatively. Exclusive inclusion of all the instructional objectives with adequate weightage should be taken care of.

Instructional Objectives and Specification

Instructional objectives can be defined as the specific or immediate outcome as result of an instruction. It could be design in such a manner that it shows what the students should be able to recall or perform after the completion of classroom couerwork. It describes the progressive changes in cognitive, affective and psychomotor domain in terms of Knowledge, comprehension, applications, skills, appreciation and so forth. But the problem arise in this

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case is that, how could a teacher understand whether the student gain any knowledge, able to apply the information he has received from the classroom interaction. It requires the presence of specification or specific objectives. Specifications are the observable and measurable changes in the behavior of the learner. It tells us what the pupil will do or how they behave if they realize an objective. Hence it is the behavioural changes showed by the students which can be observable and measurable by the teacher is called as behavioural objectives. For example, knowledge is an instructional objective; A teacher who taught the 8th class students the lesson of 'democracy'. How s/he could understand whether the student achieved the knowledge objective through his classroom interaction? Unless and until the student explain the concept of democracy or give example of any democratic country, teacher cannot understand whether s/he fulfill her/his instructional objectives. Here, the student activity of explain and give example are the specific objectives/behavioral objectives, by which a teacher can observe the attainment of instructional objectives by the students. This able the teacher quantitative as well as qualitative measurement of the same.

Indian Adaptation of Blooms' Taxonomy

NCERT has worked and adapted the blooms' taxonomy with some modification to suit with Indian situation. It clearly mentioned the cognitive, affective and psychomotor domain with their instructional objectives as well as specification.

NCERT taxonomy of educational objective

<i>Cognitive Domain</i>	<i>Psychomotor Domain</i>	<i>Affective Domain</i>
Knowledge Comprehension Application	Skill	Appreciation Interest Attitude

In cognitive domain NCERT listed the Knowledge, Comprehension and application. But it merged the analysis, synthesis and evaluation in to application objectives. Development of psychomotor domain intended by the development of skills related to the concerned subject. It may be drawing, locating, observing, experimentation, drama, and so on. Affective domain indicate the student appreciation of personalities, events, culture, tradition and good deeds of individuals etc. it also indicates the development of interest among the student to learn more related to subject by further reading, conducting interviews, preparation of album, bulletin boards, projects etc. NCERT also gave an important place to developing positive attitude among students towards constructive persons, events, and programmes which may bring world peace, Social welfare, economic as well as national development and vice versa.

Instructional Objectives and Specification

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As discussed earlier, a classroom instruction needs an effective instructional plan to achieve fruitful result. Classroom coursework are wholly depend on the instructional objectives in the lesson plan. Lesson plan is aims at to develop the cognitive, affective and psychomotor development of the child through teaching the concerned subject. Each domain has its own objective and each objective has its own specific objectives. Specific objectives are written generally in the form of action verb. To understand the writing of instructional objectives and specific objectives see the following example.

Instructional objectives and specific objectives

<i>Domain</i>	<i>Instructional objectives</i>	<i>Specific objectives</i>
Cognitive	Knowledge	Recalls, Recognize
	Comprehension	Translation, citing examples, identifies relationships, compares, interprets, detect errors, classifies, explains, discriminate etc
	Application	Applies, analyses, reasons, predict, suggest methods, formulate and test hypothesis, establish relationship, generalize, synthesis, justify, verifies, infers etc
Psychomotor	Skill	Prepare model, tools, project, album etc. Draw cartoon, map, chart, diagram etc Handle instruments appropriately Recording observation Conduct survey and interviews Present data in symbolic form Improvise model Conduct role play Acting in drill and drama Participation in literary and arts work
Affective	Appreciation	Express appreciation on valuable work, rich heritage, social activism etc. Show like and dislike of good and bad deeds prevailing in the society Participate in desirable social welfare programmes
	Interest	Show attention, curiosity, motivation, desires etc Engage in further reading voluntarily Participate in social discussions Visit places of social, historical, political and geographically important. Collect coins, stamps, pictures etc Write articles, poems etc
	Attitude	Develop positive attitude towards values, personalities, organizations; work for social, environmental and human welfare etc. Develop negative attitude towards war, crimes, antisocial activities, extremism, communalism etc

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Points to be remembered

Cognitive Domain	Deals with knowledge field or cognitive field of an individual
Affective Domain	Deals with Feeling field or heart and mind functioning of an individual
Psychomotor Domain	Deals with activity field or able to perform psycho motor functions

Session-8 Models of Curriculum Development

Tyler's Model

Tyler's model for curriculum designing is based on the following questions:

- What educational purposes should the school seek to attain?
- What educational experiences can be provided that is likely to attain these purposes?
- How can these educational experiences be effectively organized?
- How can we determine whether these purposes are being attained?

Tyler's Model by diagram



This adapted from Urevbu, A. O. (1985: 20). *Curriculum Studies*.

The model is linear in nature, starting from objectives and ending with evaluation. In this model, evaluation is terminal. It is important to note that:

- Objectives form the basis for the selection and organization of learning experiences.
- Objectives form the basis for assessing the curriculum.
- Objectives are derived from the learner, contemporary life and subject specialist.

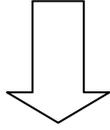
To Tyler, evaluation is a process by which one matches the initial expectation with the outcomes.

Taba's Model

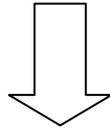
Taba's model based upon the curriculum development process similar to Tyler's, but introduced additional steps and called for more information to be provided for each of them. The model is:

Taba's model by diagram

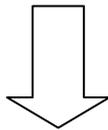
Diagnosis of needs



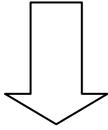
Formulation of objectives



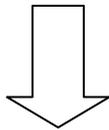
Selection of content



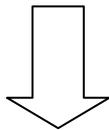
Organization of content



Selection of learning experiences



Organization of learning experiences

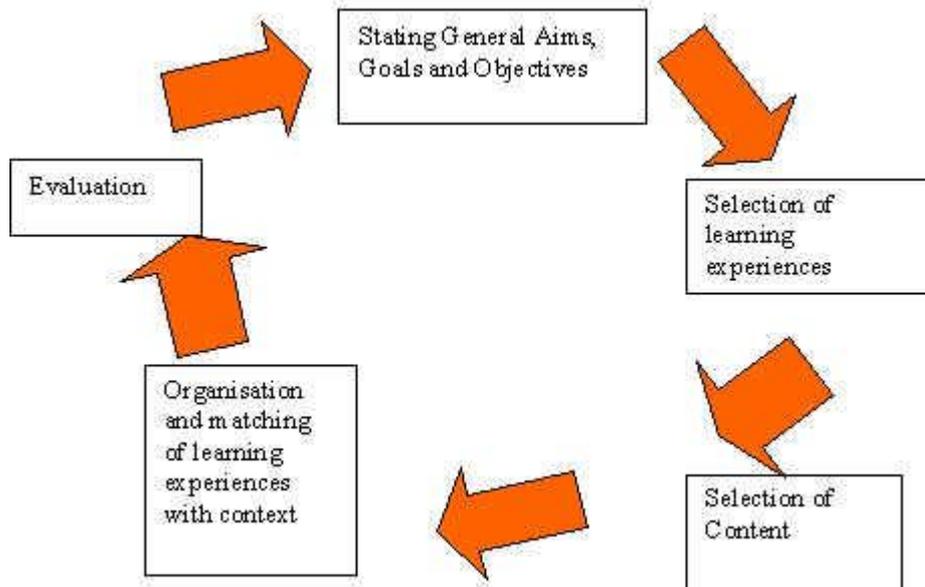


Determination of what to evaluate and the ways and means of doing it.

Wheeler's Model

Wheeler's model for curriculum design is an improvement upon Tyler's model. Instead of a linear model, Wheeler developed a cyclical model. Evaluation in Wheeler's model is not terminal. Findings from the evaluation are fed back into the objectives and the goals, which influence other stages.

Wheeler's Model by diagram



Adapted from Urevbu, A. O. (1985: 22). *Curriculum Studies*.

Wheeler contends that:

- Aims should be discussed as behaviors referring to the end product of learning which yields the ultimate goals. One can think of these ultimate goals as outcomes.
- Aims are formulated from the general to the specific in curriculum planning. This results in the formulation of objectives at both an enabling and a terminal level.
- Content is distinguished from the learning experiences which determine that content.

1 (B)

Hilda Taba is a curriculum theorist, a curriculum reformer, and a teacher educator. She had a strong belief that students could be taught to think — specifically to analyze information and create concepts. She believed that students make generalizations only after data are organized. She believed that students can be led toward making generalizations through concept development and concept attainment strategies. According to Taba, the best way to deal with increase in knowledge is to emphasize the "acquisition, understanding, and use of ideas and concepts rather than facts alone."

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Turner and Fattu were initially interested to develop a diagnostic test for teachers to identify the learning difficulties which students had to encounter. The mastery over the subject matter is essential for teachers to diagnose the students learning difficulties. It is an assumption of this model. This model of teaching utilizes stimulated teaching to develop problem solving skills. The learning difficulties are diagnosed and suggestions are given for improvement. This model is more useful for teachers rather than classroom teaching.

The following are the comparisons Tanners model and Taba's mode by using a table according to (Sigalla, 2003).

TANNER'S MODEL

TABA'S MODEL

It is interactive model of curriculum development	It is linear model of curriculum development
It has double arrows	It has single arrows
It has four elements of curriculum development	It has seven elements of curriculum development
It is a two way interaction	It is a one way interaction
Philosophy serves as the source of selection of curriculum components	Curriculum development process should be preceded by situational analysis to determining learning needs
Its proponent is tanner and Turner an interactionist	Its proponent is Taba a linearist
The model improved the kerrs model which had no phyilosophy and seemed better than all who discussed about the model	The model modified the tyler's model which had only five elements and linear also

1(C)

The following are the reasons as to why does wheelers model seem to have the same shortcomings as Tabas model;

- i). There is still a one to one relations between the elements, if he would make them relate and affect every other elements in the model by removing numbers he could differ from Taba's model
- ii). The numbering by wheeler from 1-5 seem to suggest that curriculum always start with objectives and ends with evaluation
- iii). There is no connection between objective and evaluation although it has seven steps

2(A)

Evaluation can be seen as synonymous with tests, descriptions, documents, or even management. Many definitions have been developed, but a comprehensive definition presented by the Joint Committee on Standards for Educational Evaluation (1994) holds that evaluation is “systematic investigation of the worth or merit of an object. “This definition centers on the goal of using evaluation for a purpose. Accordingly, evaluations should be conducted for action-related reasons, and the information provided should facilitate deciding a course of action.

Evaluation is an independent, systematic investigation into how, why, and to what extent objectives or goals are achieved. It can help the Foundation answer key questions about grants, clusters of grants, components, initiatives, or strategy (Twersky F, 2012).

(B)

Measurement is the assignment of numbers to objects Example: When we use a personality test such as the EPQ (Eysenck Personality Questionnaire) to obtain a measure of Extraversion –‘how outgoing someone is’ we are measuring that personality characteristic by assigning a number (a score on the test) to an object (a person). Measurement is a systematic, replicable process by which objects or events are quantified and/or classified with respect to a particular dimension. This is usually achieved by the assignment of numerical values (Weiner J, 2007)

(C)

Assess refers to make a judgment about (something) to officially say what the amount, value, or rate of (something). Evaluate or estimate the nature, ability, or quality of (something). The teacher to evaluate the ability of students in the class.

(3)

Curriculum development is a local, regional, or state/provincial level process that student teachers often have difficulty comprehending (Hansen, Fliesser, Froelich, & McClain, 1992). In their eyes, it is something undertaken by authorities (e.g., regional advisory committee members or school board writing teams) with years of experience in the school system. The expectation of the teacher candidates, often enough, is that they will learn how to teach and thereby become effective at transmitting the knowledge, skills, and attitudes associated with a particular subject or program. Education practitioners with years in the profession know differently. Successful practice in the classroom is inextricably linked to curriculum development-the everyday decisions about both what to teach and how to teach. According to Hansen E, (1995) explains five principles of curriculum designs as the following;

The Essence of Curriculum Design the Need for a Conceptual Framework

Curriculum design, like education as a whole, relies on the explanation of phenomena that theory provides, but is not itself theoretical. The terms educational theory or curriculum theory can be employed only through a loose and nonscientific use of the word "theory." At its most scientific, curriculum design, is an applied science; like medicine and engineering, it draws on

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theory from the pure sciences, but itself develops not theory but operating principles to guide decision making in practical situations. (Pratt, 1980, p. 9)

Pratt's view about the place of theory in understanding the curriculum design process, clarifies the theory/practice dichotomy. Curriculum development, in his opinion, is a practical phenomenon that does not couple well with theory (i.e., theory does not drive curriculum development and curriculum development does not drive theory). Pratt is convinced that curriculum cannot be governed by theory alone.

Pratt defines design as a deliberate process of devising, planning, and selecting the elements, techniques, and procedures that constitute an organized learning endeavor. Embedded in the notion of designing, according to Pratt, is a deeper set of understandings that imply the production of something that is conceptual as well as material (p. 5). "The curriculum designer ...must develop priorities to guide the selection of tasks to be performed, as well as be able to perform them" (p. 10).