Unit 5 - Curriculum and Its Principles

Curriculum and Its Principles

Meaning and Definitions of Curriculum

A curriculum can be called as a plan for learning, which contains assumptions about the purpose of an education in our society. It also has a definite structure through which the vision of the planner can be translated into learning experiences of the learner. The curriculum is the totality of experiences that the child gains through the multifarious activities in school. A well designed curriculum helps the learner in gaining knowledge, developing concepts and inculcating skills, attitude, values and habits which are conducive for the all round development of their personality. Hence, any curriculum comprises two major dimensions i.e. a vision and a structure.

a According to the Modern Concept of Curriculum, it does not mean only the academic subjects, traditionally taught in schools but it includes the sum total of experiences that pupil receives through the manifold activities that go on in the school, classroom, library, laboratory, workshop, playgrounds and in the numerous informal contacts between teachers and pupil. In this sense, curriculum touches the life of the students at all points and helps in the evolution of a balanced personality.

Thus, a curriculum is a systematic arrangement of the sum total of selected learning experiences planned by a school for a defined group of students to attain the aim of a particular educational programme. It is commonly formed as a Programme of Studies.

It is intimately related to education. While an education is a process, curriculum is a means of the process. While an education is learning, curriculum signifies a situation for learning.

According to **Tanner and Tanne**r, “Curriculum is the reconstruction of knowledge and experience systematically developed under the auspices of the school (or university), to enable the learner to increase his or her control of knowledge and experience".

According to **Coles**, "Curriculum is the sum of all the activities, experiences and learning opportunities for which an institution takes responsibility either deliberately or by default".

Characteristics of Curriculum

- It must be continuously evolving from one period to another, to the present. For a curriculum to be effective, it must have continuous monitoring and an evaluation. It must adapt its educational activities and services to meet the needs of a modern and dynamic community.
- It is based on the needs of the people. It should be in proper sequence in order to meet the challenges of time and to make an education more responsive.
- It comprises complex details as it includes guidance and counseling, health services, projects and also provides the proper instructional equipment that are often most conductive to learning.
- should fulfil the needs and requirements of the developing children.
- It complements and cooperates with other programs of the community. So, the curriculum is responsive to the needs of the community.
- Each curriculum objective should constitute learning i.e.
  (i) Durable-will be useful to the student for a considerable period of his/her lifetime.
  (ii) Significant-will have a major effect upon how the student will function.
  (iii) Transferable-will be useful in meeting needs in other educational programmes or the student's personal life.

Each outcome assessment and evaluation should be accompanied by both the criteria by which the learning will be judged and the standards of quality which will apply.

Principles of Curriculum

The success of a curriculum depends on certain principles which needs to be developed in mind, while framing a curriculum.

These are as follows-

Principle of Child-Centeredness It means that what is to be given to children in the form of learning experiences at a particular age and grade should properly suit their age, abilities, capacities, interests, mental development and previous experiences. Therefore, in all circumstances it

Principle of Comprehensiveness Curriculum must have necessary details because merely a list of topics will not serve the purpose either of the teacher or the student, Material aids, techniques, life situations, related activities, possibilities of correlation, etc, should be listed in the curriculum, so, that these can serve as a guide to the teachers and authors of textbooks.

Principle of Correlation The curriculum should be such that all subjects are related to each other. Teaching all subjects separately would be unpsychological, so it must be kept in mind that the subject matter of various subjects has some affinity with each other so that they can help the child eventually.

Principle of Utility According to this principle, only those topics, subject materials and learning experiences should be included in the curriculum, which are found to possess any utility to the students.

Principle of Forward Looking The principle of forward looking, asks for an inclusion of those topics, contents and learning experiences that may prove helpful to the students in leading their future life in a proper way. Therefore, attempts should always be made to include the topics and learning experiences.

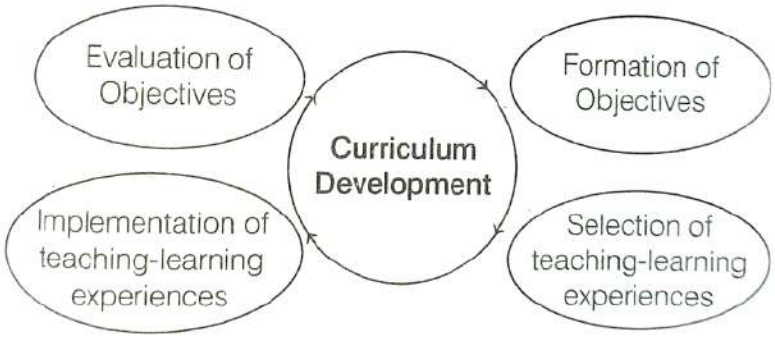
Principle of Environmental Centeredness The curriculum is developed keeping in view the physical and social environment of the students. Therefore, the selection of subject material and learning experiences should be based on or linked with events, the problems and situations prevalent in their physical and social environment.

Curriculum Development

Curriculum development refers to the actual implementation of the results of the decisions reached during curriculum planning. This means that when decisions have been made in respect to the nature, organization and orientation of the curriculum, it becomes the place of curriculum development to build a curriculum based on the decisions.

According to Nicholls and Nicholls, “the planning of learning opportunities intended to bring about certain changes in pupils and the assessment of the extent to which these changes have taken place in what is meant by curriculum development”.

So, curriculum development and planning has been visualized as a continuous and dynamic process.



Strategies of Curriculum Development

There are few strategies that plays a significant role in the curriculum development and they are discussed below

Problem Identification Firstlly, while developing a curriculum, the problem areas need to be identified to meet the needs of the curriculum as it will help to improvise the content formation. It is an important strategy in curriculum development as it highlights the issues of relevance that need modification for effective curriculum.

Needs Assessment of Learners Curriculum development should be viewed as a process by which meeting student's needs lead to improvement of student's learning. It should include the desired outcomes or expectations of a high quality program, the role of an assessment, the current status of a student's achievements and actual program content. An effective curriculum development process usually entails a structured needs assessment to gather information and to guide the curriculum development process.

Goals and Objectives Curriculum goals are general and broad statements that lead towards long-term outcomes. Specifically, goals are always for reaching the objectives and are usually based on the ideas that they lead students towards being better able to be productive members of the society.

Educational Strategies and Implementation An educational strategy must be clear as per the requirement of the curriculum. An innovative and productive approach will help the students to gather relevant information from the provided by their teacher. Proper implementation of educational strategies will fetch maximum output in the process of curriculum development. sources

Feedback and Evaluation The curriculum development cycle ends and then begins again with a careful evaluation of the effectiveness and impact of the program. The detailed review and analysis of quantitative and qualitative

Stages of Curriculum Development

There are four stages in the process of curriculum development that are discussed below

Planning The curriculum planning considers the vision, mission and goals. It also includes the philosophy of strong education belief of the school. All of these will eventually be translated to classroom desired learning outcomes for the learners. The planning stage lays the foundation for all of the curriculum development steps that are identifying the needs according to the curriculum and need to conduct assessment and analysis.

Curriculum Designing It is the way in which curriculum is conceptualized to include the selection and organization of the content, the selection and organization of learning experiences as well as the selection of an assessment procedure to measure achieved learning outcomes. A curriculum design will also include the resources to be utilized and the statement of the intended learning outcomes.

Curriculum Implementing It means putting into action the plan which is based on the curriculum design in the learning environment. The teacher is the facilitator of learning and together with the learners uses the curriculum as to design to what will transpire in the classroom with the end in view of achieving the intended learning outcomes. Implementing the curriculum is where action takes place.

Evaluation It determines the extent to which the desired outcomes have been achieved. This procedure is ongoing in finding out the progress of learning. Along the way, an evaluation will determine the factors that have supported the implementation. It will help in making improvements and taking corrective measures. The result of an evaluation is very important for curriculum planners and implementers.

Foundations of Curriculum Planning

The foundation of curriculum sets an external boundary of the knowledge of curriculum and defines what constitutes a valid source of information from which are accepted theories, principles and ideas relevant in the field of curriculum.

The foundations of curriculum are considered usually from philosophical, sociological and psychological point of view as discussed below-

Philosophical Foundation of Curriculum

It helps to determine the driving purpose of education as well as the roles of various participants. While all foundations propose to set goals of curriculum, philosophy presents the manner of thinking from which those goals are creàted. Philosophies vary in perception of truth ranging from absolute to relative and from moralistic to scientific.

In essence, the philosophy of education influences to a large extent that determines our educational decisions and alternatives. Those who are responsible for curricular decisions, therefore, should be clear about what they believe.

There are four major philosophical positions that have influenced curriculum development and they are-

- Idealism
- Realism
- Pragmatism
- Existentialism

Idealism and Curriculum The idealists approach the problem of curriculum from the domain of ideas and ideals. Idealistic curriculum provides for the training and cultivation of intellectual, moral and aesthetic activities. For the intellectual development of the child, languages, literature, sciences, social studies and mathematics are included in the curriculum. For the aesthetic and method of development fine arts, poetry-ethics and religion are provided.

Realism and Curriculum Realism centered the education field as a protest against the narrowness of the bookish, sophisticated and abstruse curricula. Realism holds that education should be closely related with the actual realities of life in all conceivable aspects.

Pragmatism and Curriculum Pragmatism is a practical and utilitarian school of philosophy, it has influenced the educational curriculum to the maximum extent. It enables Benchmarking the child to solve his daily problems and also lead a better and happier life by creating new values.

Sociological Foundation of Curriculum

Education is the process that takes place in society, for society and by society. The changing nature of the cultural aspect has its impact on education. Education has to adjust itself to the changing situations. So, curriculum should be designed according to the changes and should promote desirable changes in learners also.

The social reconstructionists are dissatisfied with the social, political and economic order of society and take the curriculum as a vehicle for reconstruction of the society. They advocate a curriculum which gives vision of an ideal society and ensures reconstruction of present society

on the basis of that vision. The reconstructionists suggest that curriculum should confront the learners with issues that mankind face and this curriculum should develop in learners, the ability of critically analyzing these issues and finding out possible solutions. Consequently, the learners will develop a deep understanding of the society and they will strive for better social order.

Psychological Foundation of Curriculum

It consists of the accumulated knowledge which guides the learning process and allows the teacher, who is executing the curriculum to make intelligent decisions regarding the behavior of the learner.

Selection of curriculum content and its organization are based on various theories of Psychology such as laws of learning, theories of interest and attention, transfer of learning, growth and development of physique and mental intelligence, creativity and personality development. It is agreed by all that the curriculum should be organized based on the ability of the learner.

It is based on certain theories of learning theories of learning and motivation and on the aptitude and that comprised of :

Behaviorist Theories They deal with an aspect of stimulus i.e. response and reinforcement scheme.

Cognitive Theories They view the learner in relationship with the total environment.

Phenomenology Theories They emphasize an effective domain of learning.

Benchmarking

It is a tool for improving performance by comparing the performance or standards or both with those of its peers. can be strategic (addressing priority issues) or cyclical (addressing a number of areas on a regular basis) or adhoc (taking advantage of an opportunity).

The strategy of benchmarking is important both conceptually and practically and it is being used for improving administrative processes as well as instructional models at colleges and universities by examining processes and models at other schools and adopting their techniques or approaches.

The goal of benchmarking is to provide key personnel, incharge of processes, with an external standard for measuring the quality and cost of internal activities and helps to identify where opportunities for improvement may reside.

Benchmarking with appropriate partners, at a national or international level, enables the University to compare and evaluate its performance in doing so, monitor standards, compare good practice and make quality improvements.

According to **Kempner**, "Benchmarking is ongoing. systematic process for measuring and comparing the work process of an organization to those of another, by bringing an

external focus to internal activities, functions or operations".

According to **Leibfried and Mcnair**, "Benchmarking is analogous to the human learning process and it has been described as a method of teaching an institution how to improve".

Types of Benchmarking

Benchmarking as a process, is both complex and comprehensive in terms of what type and for what purpose it can be used. In the past, it was commonly used as a way to compare data only. However, it is used as a more investigative, research informed process, is gaining momentum in the higher education sector and adds rigor to decision-making processes at an institutional level.

The university employs a number of different types of benchmarking to support its goal of continuous improvement. These are internal, competitive, functional and genetic benchmarking.

It can also be characterized as-

Quantitative Where the focus is on quantifiable outputs of data.

Qualitative Which looks at the systems and processes that deliver the result where benchmarks are generally attributes of good practices.

The different types of benchmarking are-

Internal: The work processes are compared between departments, divisions or other internal university segments. Advantages of such benchmarking includes the ease of data collection and the definition of areas for future external investigation. The primary disadvantage of an internal benchmarking is a lower probability that will yield significant process improvement breakthroughs.

Competitive: The performance of an organization is measured against its peers' competitors. In competitive benchmarking, a third party rather than an organization itself, often collects and analyses the data because of its proprietary nature.

Functional This type of benchmarking is an opportunity for breakthrough improvements by analyzing high performing processes across a variety of students.

Generic This type of benchmarking makes the broadest use of data collection from different kinds of organizations.

Role of National Level Statutory Bodies

There are several national level statutory bodies in India for higher education and they are as follows-

University Grants Commission (UGC)

According to the recommendation of the **University Education Commission**, the Government of India established **University Grants Commission** in **1953.** Later, it was made a statutory body under the **University Grants Commission Act of 1956**. It prescribes standards for infra structural facilities, curricula and qualification of teachers, salary of teachers and other factors required for maintaining the quality of higher education

The commission inspects universities with a view to evaluate the above aspects and give recognition to the deserving institutions. It provides financial assistance to the recognised universities in the form of grants and conducts periodical evaluation to ensure the standards are maintained without lapse.

Role of UGC in Curriculum Development

The University Grant Commission plays an important role in the development of curriculum, as explained below

- It reviews and updates curriculum which is the essential ingredient of its academic system.
- It works in coordination with other related bodies towards curriculum development like NCTE.
- It also cooperates in curriculum creation programmes with international level organizations.
- For the development of curriculum, the committees for each subject are constituted.
- It upgrades/reframes the curricula in various subjects at the UG/PG levels .
- It organizes training programmes, workshops, seminars and conferences.
- It advises the central government and governments on the measures for the improvement of university education. sta
- It allows students to provide fellowships and scholarships to students.
- It monitors its 24 hour's educational channel Vyas through which it imparts education to students from various streams.
- It monitors an educational curriculum and scrutinizes the proposals from universities for new courses and grants.

So, UGC plays a significant role in the curriculum development process. Irrespective of this, it collects information on university's education system in India and compares the same with the education system in other countries.

National Council for Teacher Education (NCTE)

Since **1973**, the National Council for Teacher Education has been an advisory body for the central and state governments, on all matters pertaining to teacher education, with its secretariat in the Department of Teacher Education of the National Council of Educational Research and Training (NCERT). The NCTE as statutory body came into existence in pursuance of the National Council for Teacher Education Act, 1993 on 17th August, 1995. It has its headquarters at New Delhi and four regional committees at Bangalore, Bhopal, Bhubaneswar and Jaipur.

The NCTE in Delhi as well as its four regional committees have administrative and academic wings to deal respectively, with finance, establishment and legal matters with research, policy planning, monitoring, curriculum, innovations, coordination, library and documentation in service programmes. It's headquarters is headed by the chairperson, while each regional committee is headed by regional director.

Role of NCTE in Curriculum Development

It lays down norms for any specified category of courses or training in teacher education including course content and mode of curriculum. It makes recommendations to the central and state governments, universities, UGC and its recognised institutes in matters of preparing plans and programmes for teacher education.

From time to time, NCTE brings about necessary curriculum changes. It prepared the National Curriculum Framework For Teacher Education (2009). This curriculum has given a systematic and comprehending framework for teacher education and also highlights the strategies to implement it. In this curriculum framework almost every aspect of teacher education got preference. in

The NCFTE (2009) paved the way for implementing curricular areas by giving practical and reasonable strategies, It's main role is to achieve planned and coordinated development of the teacher education system throughout the country which is an important part of the curriculum development process. It aims at training individuals for equipping them to teach pre-primary, primary, secondary and senior secondary stages in schools, non-formal and part-time education.

It also promotes and conducts innovation research in various areas of teacher education.

It has revised the regulations in 2014 that includes-

- establishment of teacher education in composite institutions that consists of multi-disciplinary education programmes.
- Each programme curriculum gives importance to yoga education, ICT, inclusive education, etc.
- open and distance learning has developed and improved the performance due to inbuilt quality assurance mechanisms.

University in Curriculum Development

University plays an important role in implementing the curriculum and its responsibilities are discussed below

- It facilitates the collaboration with community colleges, to ensure that the materials are suitable for the college's student population and methods of instructions.
- It ensures materials can be accessed electronically by students, allowing their use for distance learning.
- It works with industry and employee groups to ensure that the material will prepare the students to meet emerging workforce needs.
- It collaborates with the community college's members in each region to support the discrimination and use of these materials.

Thus, the university plays a significant role in the curriculum development process and tries to ensure that it can provide proper guidance to the learners.

Conclusion

Curriculum is an instructional and educative programme, by following which the pupils achieve their goals, ideals and aspirations of life. The curriculum should integrate cognitive, affective and psychomotor objectives and abilities.

Curriculum development has to satisfy the different foundations of curriculum and thereby they could be adopted in multicultural classroom settings. Hence, great effort should be taken to frame such a curriculum before executing the process of teaching at all levels of education.

Models of Curriculum Design

Curriculum Design

Curriculum design is a complex but systematic process. The curriculum designing is conducted stage by stage. Generally, all models stress the importance of considering a variety of factors that influence curriculum. It involves issues based on three basic ideas i.e. theoretical, philosophical and practical.

The term 'curriculum design' is used to describe the purposeful, deliberate, and systematic organization of curriculum (instructional blocks) within a class or course. In other words, it is a way for teachers to plan instruction. When teachers design curriculum, they identify what will be done, who will do it, and what schedule to follow. It refers to the arrangement of the components or elements of a curriculum

It is a very important part of creating a contextually relevant and responsive teaching and learning environment for both teachers and students. It is a process of critical questioning to frame learning and teaching. The main purpose of the process is to translate broad statements of intent into specific plans and actions.

According to **Saylor and Alexander,** curriculum design means “The pattern or framework or structural organization used in selecting, planning and carrying forward educational experiences in the school”.

Johnson *identified three notions of curriculum design as-*

- an arrangement of selected and ordered learning outcomes intended to be achieved through instruction.
- an arrangement of selected and ordered learning experiences to be provided in an instructional situation.
- a scheme for planning and providing learning experiences. While designing the curriculum following factors should be considered.

While designing the curriculum following factors should be considered

- The design should facilitate and encourage all types of learning experiences essential for the achievement of the desired outcomes.
- The design should permit teachers to utilise principles of learning for guiding learning activities,
- The design should enable the teachers to develop those experiences that are most meaningful to a particular group of learners.
- The design should be in accordance to the developmental needs of the students,
- The design should be in such a way that there should be continuous flow of learning experiences.
- The design should be realistic, feasible, cost effective, accessible and widely acceptable.

Thus, designing curriculum means planning which the teachers follow for providing learning activities in the class and the school.

Curriculum Design Tips

The following curriculum design tips can help educators to manage each stage of the curriculum design process

Identify the Needs of Stakeholders (i.e. students) early on in the curriculum design process. This can be done through needs analysis, which involves the collection and analysis of data related to the learner. This data might include what learners already know and what they need to know to be proficient in a particular area or skill. It may also include information about the learner's perceptions, strengths and weaknesses.

Create a Clear List of Learning Goals and Outcomes This will help to focus on the intended purpose of the curriculum and allow to plan instruction that can achieve the desired results. Learning goals are the things teachers want students to achieve in the course. Learning outcomes are the measurable knowledge, skills and attitudes that students should have achieved in the course.

Identify Constraints That will impact curriculum design. For example, time is a common constraint that must be considered. There are so many hours, days, weeks and months in the term. If there isn't enough time to deliver all of the instructions that has been planned, it will impact learning outcomes.

Identify the Instructional Methods That will be used throughout the course and consider how they will work with the student's learning styles.

Establish Evaluation Methods That will be used at the end and during the year to assess learners, instructors and the curriculum, which will determine the success and failure of curriculum.

Types of Curriculum Design

There are three basic types of curriculum design and they are-

Subject-Centered

It revolves around a particular subject matter or discipline. It tends to focus on the subject rather than the individual. It describes what needs to bę studied and how it should be studied.

A Core curriculum is an example of a subject-centered curriculum design, which can be standardized across schools, states and the country as a whole. In standardized core curricula,

teachers are provided a predetermined list of things that they need to teach their students, along with specific examples of how these things should be taught.

The primary drawback of subject-centered curriculum design is that it is not student-centered. In particular, this form of curriculum design is constructed without taking into account the specific learning styles of the students. This can cause problems with student's engagement and motivation and may even cause students to fall behind in class.

Learner-Centered

In this the center of the interest is the learner. The students are given more importance. In this the teacher's role is not that of a task master but that of a guide. In this, the child is treated as plant, the teacher as a gardener and the school as garden. It gives several options to the students. Students are actively involved in planning and evaluation of the options in general and for themselves in particular. Learner-centered curriculum points out that “the more experience in life a child has the more eager he will be to learn". Thus, the learner-centered broadly encompasses methods of teachers that shift the focus of instruction from the teacher to the student.

Problem-Centered

It focuses on teaching students how to look at a problem and come up with a solution to the problem. Thus, students are exposed to real-life issues, which helps them to develop skills that are transferable to the real world.

It increases the relevance of the curriculum and allows students to be creative and innovate as they are learning. The drawback of problem-centered curriculum design is that it does not always take learning styles into consideration.

Dimensions of Curriculum Design

The curriculum design is a statement, reflecting the relationships between the curricular components. It has to be developed on the basis of certain dimensions like scope, integration, sequence, continuity, articulation and balance. These considerations will determine the shape of the curriculum and the kinds of leaming experiences, it will provide.

The various dimensions of curriculum design are

Scope according to Saylor, scope is defined as "The care to be provided to pupil as they progress through the , cducational that school programme. It represents the latitudinal axis for selecting curriculum experiences". It determines the depth to which the subject matter has to be dealt with, the type of learning activities to be provided and decisions about the arrangement of curricular components.

Integration Learning becomes meaningful when content from one field is interrelated with content from another. The major task confronting a curriculum design is to integrate learning

experiences of the learner at a particular Jewel of the curriculum. "It is an attempt to inter-relate content with learning experiences and activities to ensure that students' needs are met".

Sequence While arranging the components of curriculum, a vertical sequence should be followed, i.e there should be a vertical relationship between the (curricular elements so as to enable continuous learning. Based on well accepted learning principles, Smith, Stanley and Shores (1957) have given four basis for sequencing content. These are

1. Simple to Complex Learning For instance, teaching two-digit addition to five-digit addition.
2. Part to Whole Like teaching digestive system to the entire human body system.
3. Whole to Part Teaching the concept of animal and then giving an example of types of animal.
4. (Chronological Learning Chronological occurrence of historical events.

Continuity It implies the repetition of such skills of ideas in the curriculum, about which the learners should have (in depth knowledge.

Articulation and Balance It refers to inter-relatedness of concepts of a curriculum. The relation can be either Horizontal or vertical. Vertical articulation occurs when certain topics, lessons or courses are related to those occurring later in the curriculum sequence. Horizontal articulation occurs between curricular components, Simultaneously

Curriculum designers are also concerned about an appropriate weightage to be given to every aspect of , so that a balanced curriculum emerges. A balanced curriculum is one that helps the learners to gain knowledge and utilize it, to achieve their goals.

Curriculum Design Models

The concept of curriculum design refers to the arrangement of elements of curriculum into holistic plans. It is a complex but systematic process. Here, are discussed a variety of models of curriculum design in order to make this complaint activity understandable and manageable.

Traditional Model

Ralph Tyler was the first to lay out the Traditional Model in 1949, in his influential book, ‘Basic Principles of Curriculum and Instruction'. In general, his method is thought of to be the principal way to form a concept of curriculum development. Because of its wide use in schools, throughout the world, many teachers and students find it a familiar concept. The approach has a 'subject-centered' orientation, i.e. a set of experts, pre-determine subject matters that are mastered by students. The curriculum is structured around content's units and the sequence of what is taught follows the logic of the subject matter (Knowles, 1984).

The systemised ideologies, demonstrated in the introduction of Tyler's book, categorize the school as the controller of power in deciding what is taught

- “What educational purposes should the school seek to attain?
- How can learning experiences be selected, which are likely to be useful in attaining these objectives?
- How can learning experiences be organized, for effective instruction?
- How can the effectiveness of learning experiences be evaluated?"(Tyler, 1971)

According to Tyler, “Curriculum is a growing process, over the course of the schooling years, educational experiences accumulate to exert profound changes in the leamer, in the way water dripping upon a stone wears it away (Tyler, 1971)". He expresses that knowledge and skills cannot be photocopied, but instead, are taught in a sequence over time. A Spiral approach, in which learners return to topics, in more complexity over time, can also be considered a Traditional approach. Skills based or competency based instruction, common in adult basic education, often draws upon a Traditionalist approach to curriculum, with students mastering a given set of skills or procedures in a reasonable instructional cycle.

Advantages

- The main advantage of this model is that students easily adapt to various methods of teaching,
- Another advantage is that learning distinct skills in a systematic fashion provides itself to traditional testing. Test scores can be easily calculated, and explained to funders as program results.
- Program administrators can use the results of traditional tests to defend their program's achievements. Students, tutors and teachers can direct to confirmed progress, and that is undoubtedly motivating.
- Where resources are limited, the traditional model is much more competent.

Disadvantages

- The traditional approach to syllabus design lacks integration.
- It focuses on one particular subject, without the students being able to understand how one subject implements another.
- It includes passivity and authority. Students within the traditional curriculum often become passive learners.

Contemporary Model

It indicates a close relationship between curriculum, planning goals, learning objectives and implementation. It is based on a Learner-Centered Approach. It places the child at the center of education. It begins with understanding the educational contexts from which a child comes. The curriculum is constructed based on the needs, interests, purposes and abilities of the learners.

Teacher tries to maximize student's productivity, knowledge acquisition, skills argumentation and development of personal and professional abilities. Teachers may use a variety of instructional tools and methods, as well as flexible arrangement of time and place.

The major difference between the two models is that, in the **Contemporary** Model the curriculum is a combined effort of teachers and learners, since learners are very much involved in the decision-making, regarding the content of the curriculum and the manner it is delivered. Whereas in the Traditional Model, the teacher has most, if not all authority when it comes to decisions.

Advantages

- Learning comes to be seen as a process of gradually reaching achievable goals. .
- Students develop greater sensitivity to their role as learners, and their vague notions of what it is to be a learner can become much sharper.
- Classroom's activities can be seen to relate to the learner's real-life needs.
- Self-evaluation becomes more feasible.
- Greater emphasis on the student's needs.

Disadvantages

- Most of the outcomes rely on the teacher's ability to create material, appropriate to the learner's needs.
- It requires a skilled teacher, time and resources.
- Teachers find it difficult to strike a balance among the competing needs and interests of the child.

Competency Based Model

According to Anshari R Sastrawinata, “Competence is a statement which describes the appearance of a certain ability unanimously that is a blend of knowledge and skills that can be observed and measured”. Elza Mylona said that competency is about integration and applications of learned facts, skills and effective qualities, needed to serve the patient, the community and the profession.

are on It refers to system of instructions, assessments, grading, and academic reporting that based students, demonstrating that they have learned the knowledge and skills that they are expected to learn as they progress through their education.

a In other definition he says that “Competency Based concept is a focus on student's mastery of performance and learning outcomes through a set of pre-defined learning objectives”.

It is a design, based on specific competencies characterized by specific, sequential, and demonstrable learning of the tasks, activities, or skills, which constitutes the act to be learned and performed by students.

It is a model that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitude to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally defined subject content. In principle such a curriculum is learner-centered and adaptive to the changing needs of students, teachers and society. It implies that learning activities and environment are chosen, so that learners can acquire and apply the knowledge, skills and attitude to situations they encounter in everyday life. They are usually designed around a set of key competencies/competencies that can be cross-curricular and/or subject-bound.

There are some aspects that describe the concept of Knowledge Understanding .

- Skill
- Value
- Attitude
- Interest
- Knowledge
- Understanding

Characteristics of Competency Based Model

Jobelle B Salvador wrote the characteristics of competency based

- Learning is measured according to how well the learner performs in relation to competencies (objectives).
- Instructional system in which performance based learning process is used.
- Focuses on the outcome of the learning.
- Addresses, what the learners are expected to do rather than on what they are expected to learn about.
- Allows the student to learn at their own pace.
- Student's progress by demonstrating competence, which means they have to prove that they mastered the knowledge and skills required for a particular course.

Advantages

- The learning centers real world skills and competency development programs.
- Participants build confidence as they succeed in mastering specific competencies.
- Students' learning is enhanced because of the specification of expected outcomes and continuous feedback.
- The quality of assessment and teaching has improved.

Disadvantages

- It works well with the same learning environment and less well with others.
- It focuses on immediate needs and is less focused on preparing learners with the flexibility needed for a much uncertain future.
- It takes an objectivist approach to learning.
- It does not suit all kinds of learners.

Academic/Discipline Based Model

It is model of curriculum in which content is divided into separate and distinct subjects or disciplines, such as language, science, mathematics, and social studies. The term 'discipline based' or 'subject based' covers the full range of distinct subjects or fields of study, including the more traditional usage in areas such as mathematics or physics , in areas of study with a strong professional focus such as molecular biology and in newer areas of study such as media education.

Learners must have frequent and recurring opportunities to practice their disciplinary skills throughout their fields that allows later courses to build on the work study, in a way of earlier ones.

The instructional emphasis of it tends to be on specific, current, and factual information and skills, as it emerges from the discipline experts. Its approach characterizes teaching practice within one subject and encourages teachers for specialization, depth of content knowledge, and integrity to the conventions of their disciplines.

Activity Module

It is a format for curriculum design developed to meet unique needs, contexts and purposes. In order to address these goals, curriculum developers design, reconfigure or rearrange one or more key curriculum components. Activity is the natural urge of the child. It is used as a media or means for imparting knowledge and skills. In this model, activity is the greatest motivation, provided to the child to enjoy the freedom of expressing himself fully. Its core premises include the requirement that learning should be based on doing some hands on experiments and activities. In short, it is anything that students do in a classroom other than merely passively listening to an instructor's lecture. According to Tanner and Tanner, “Activity Model is an attempt to treat learning as an active process”.

It discards the boundaries and the model was centered largely on areas of child's interest. It's objective was child growth through experience. According to Beans, “the major premise of activity movement was that the learner ought to be an active rather than a passive participant in learning". However the title “activity curriculum' did not come into general use before 1920. In 1944, David Horsburgh started his school Neel Bagh in India. It was based on an innovative

idea of Horsburgh. It was known for its creative methods in teaching and well-planned learning materials. Later, this initiative of Horshburgh was proved to be one of the pioneer and milestones in Activity Based model.

Requirement of Activity Model

School must have proper infrastructure, ample facilities or displays and decorations, well lighted and there must be separate ground for gardening.

Training of teachers, classroom equipment, activity rooms, transportation facilities, students grouping and flexibility in administrative arrangements.

Advantages

- It revolves around those childrens who are either not academically talented or have not shown interest in school. It tends to stimulate these type of students into participating and eventually absorbing information.
- It makes the teaching fun.
- Students feel a sense of accomplishment, when the task is completed
- Students are able to transfer that experience easier to other learning situations.
- Students who are involved in activities are empowered in their own learning experiences.

Disadvantages

- A radical departure from traditional ways of learning and teaching
- It has no assurance of learning cultural heritage.
- The facts and principles that are learned are not permanently retained.
- Teachers are not prepared to carry on an activity program
- Schools are also not equipped completely.
- There is no adequate provision for logical organization.

Social Reconstruction Model

Social reconstructionists are interested in the relationship between curriculum and the social, political and economic development of society. They are convinced that education can affect social change, curriculum, for example, literacy campaigns that have contributed to successful political revolutions.

Aspects of reconstructionism appeared in American curriculum thought in the 1920s and 1930s.

Rugg's textbooks, teachings and professional leadership had one over riding quality i.e. the spirit of social criticism. He wanted learners to use newly emerging concepts from social science and aesthetics to identify and to solve current problems.

The reconstructionists seek a curriculum that emphasizes cultural pluralism, equality and futurism. They critically examine the cultural heritage of a society as well as entire civilisation. It is deliberately committed to bring about social and constructive change. It cultivates a future planning attitude that considers the realities of the world. It enlists students and teachers in a definite program to enhance cultural renewal and interculturalism.

It strengthens the control of the schools by and for goal seeking interests of the overwhelming majority of mankind. For reconstructionism analysis, interpretation and

evaluation of problems are insufficient, commitment and action by students and teachers are needed. The teacher should measure up to their social responsibilities . The reconstructionist design provides students with learning requisite for altering social, economical and political realities. The curriculum should foster social action, aimed at reconstructing society. It encourages industrial and political changes. The students should be involved in creating a more equitable society.

It would include bringing students into their community. Ideally, students would spend half of their time in the classroom and the other half, outside of the curriculum in different settings. It would encourage students to directly apply what they are learning through social activism reforms and change. As part of this model, the curriculum would use service learning and discussion groups to teach, while also bringing the world into the classroom and the students out into their community.

In the early **1950s**, **Theodore Brameld** outlined the distinctive features of the social reconstructionism model. They are

First, he believed in a commitment to building a new culture. He was infused with the conviction that people are in the midst of a revolutionary period from which the common people will emerge as controllers of the industrial system. public services, and of cultural and natural resources.

Second, he felt that the working people should control all principal institutions and resources if the world is to become genuinely democratic. Teachers should ally themselves with the organized working people. A way should be found to enlist, the majority of people of all races and religions into a | great democratic body with power to enforce its policies. Third, he believed that the school should help an

individual, not only to develop socially, but to learn how to participate in social planning as well.

There are many premises of social reconstruction and the different directions taken by different reconstructionist such as revolution, critical inquiry, and futurism. A distinction is also made between a curriculum of reconstruction, which attempts to change the social order, and a curriculum of social adaptation, which helps students to fit into a world they never made. social

Social Function Model

It focuses heavily on society. Social processes, functions of problems become the center for the design of the curriculum. One way to look at this approach is to see it as using social studies to become the general background of the entire curriculum.

the curriculum is more flexible. The curriculum is structured around the various aspects of arcas subservient to the problem. This design is more subjective than is either the subject-centered or broad field. Cooperative planning occurs more frequently. The

The curriculum developed through this model creates an Awareness among the learners regarding social problems and enables them to solve the problems,.

Individuals's Model Individual's Needs and Interest

It takes cach individual's needs, interests and goals into consideration. In other words, it acknowledges that students are not uniform and adjusts to those student's needs. It is meant to empower learners that allows them to shape their education through choices.

The instructional plans in this model are differentiated, giving students the opportunity to choose assignments, Learning experiences and activities. This can motivate the students and helps them to stay engaged in the material that they are learning

The drawback of it is that it is labor intensive. Developing differentiated instruction, puts pressure on the teacher to create instruction or to find materials that are conducive to each student's learning needs. Teachers may not have the time or may lack the experience or skills to create such plans.

It requires that teachers balance student's wants and interests with student's needs and required outcomes, which is not an easy balance to obtain.

Outcome Based Integrative Model

It was designed to help students to develop a deep understanding of organized bodies of knowledge while simultaneously developing critical thinking skills. It is closely related to the Inductive Model and based on the work of Hilda Taba (1965-67). It uses organized bodies of knowledge that combine facts, concepts, generalizations and the relationships among them.

It has two learning objectives

- Deep and thorough understanding of organized bodies of knowledge.
- Use of critical thinking skills.

In this model, the teacher facilitates the student's analysis of information about a topic in an organized way. This model relies on formal strategies that teach students how to analyze and

interpret information. The model supports student's learning across the academic subject area while also empowering them to become independent learners. This model is one of the best models for teaching conceptual knowledge, the interrelationship of facts, concepts and effectively addressing learning goals related to students' development and critical thinking skills required to understand information presented in organized bodies of knowledge.

Implementing Lessons with Outcome Based Integrative Model

Phase 1: The Open ended Phase In this phase, learners describe, compare and search for patterns in data. It promotes involvement and ensures success. The teacher starts with one cell of information and moves to other cells. Teacher records student's observations or comparisons on the board.

Phase 2: The Casual Phase In this phase, students explain similarities and differences, using data to justify conclusions (documenting assertions). In this, students develop perception of competence,

Phase 3 : Hypothetical Phase In this phase, learners hypothesize outcomes for different conditions (as suggested by the teacher). It facilitates transfer and student's self-efficacy increases as they learn to respond successfully.

Phase 4 : Closure and Application Phase In this phase, students generalize to form broad relationships which summarizes the content.

Intervention Model

It is designed to meet the complex needs of children with mild disabilities. The interventions developed through this are called the Strategies Interventions Model. They can be grouped into three major categories according to Deshler and Schumaker. The first category of interventions, called learning strategy interventions, were developed because many students with disabilities are ineffective learners, who lack information processing skills to cope with wide range of content and complexity of tasks they encounter in secondary classes.

The critical features of successful strategy instruction includes

- daily and sustained instruction.
- multiple opportunities to practice the strategy of variety of situations
- individualized feedback and
- required mastery of the strategy. .

The second category of interventions called content enhancement routines, are instructional routines use to enhance their delivery of content information and improve their student's understanding and recall of the content Many cognitively and emotionally challenged students have difficulty in organizing, understanding, storing and remembering of information, presented during large group instruction, in general education classroom.

The third category of intervention called empowerment interventions, which are geared towards empowering students to perform at their best and to create positive relationships with others, in the school setting For instance, several social and motivational strategies have been developed to enable students to interact in a positive way with peers and teachers as well as to engage in self-advocacy,

Stufflebeam's Context, Input, Process, Product Model/CIPP Model

The weaknesses in the Tyler's Model led several evaluation experts in the late 1960s and early 1970s to attack the Tyler's Model and to offer their own alternatives.

The alternative that had the greatest impact was that developed by a **Phi Delta Kappa Committee, chaired by Daniel Stufflebeam (1971**). This model seemed to appeal to educational leaders because it emphasized the importance of producing evaluative data for decision-making. Infact, decision-making was the sole justification for evaluation, in the view of the Phi Delta Kappa Committee.

To serve the needs of decision makers, the Stufflebeam's model provides a means for generating data relating to four stages of program; operation, which continuously assesses needs; problems in the context to help decision makers to determine goals and objectives; input evaluation, which assesses alternative means for achieving those goals to help decision makers to choose optimal means; process evaluation, which monitors the processes, both to ensure that the means are actually being implemented and to make the necessary modifications; and product evaluation, which compares actual ends with intended ends and leads to a series of recycling decisions,

During each of these four stages, specific steps are been taken and they are :

- Kind of decisions are identified. .
- Kinds of data needed to make those decisions, are identified
- That data was collected.
- Criteria for determining quality were established, Data was analysed on the basis of those criteria, .
- Needed information was provided to decision makers (as cited in Glatthorn 1987, pp. 273-274).

Stufficheam's ClPP model is described below in detail

Context According to his the curriculum evaluator is engaged in studying the environment (context) in which the

curriculum is transacted. It provides the rationale for selection of objectives Content evaluation is not a one time activity. It is a continuous process for furnishing baseline information for the operation of the total system,

Input The purpose of input evaluation is to get information for how to utilise resources optimally to meet the objectives of the curriculum. It includes cvaluation of some sort of physical and non-physical inputs such as availability of physical and human resources, time and budget. It also includes previous achievements, education and aspiration of pupil.

Process It is the most critical component of the overall model. Quality of the product largely depends on it. It addresses the curriculum implementation decisions. Stuffcbcam presents the three strategies for process evaluation and

they are

I. To detect or predict defects in the procedural design of it's implementation during the diffusion stage. In dealing with or curriculum defects one should identify and monitor continually the potential sources for the failure of the curriculum.
II. To provide information for curriculum decisions. Here the decisions should be regarding test development prior to the actual implementation of the curriculum.
III. To maintain a record of procedures as they occur. It addresses the main features of the project design. For example, the content selected, the instruction strategies planned or the time allotted to the planning for such activities,

Product It helps to determine whether the curriculum objectives have been achieved or not. On the basis of collected data, we can decide whether to continue, modify, change or terminate our curriculum.

It has several features for those interested in curriculum evaluation. Its emphasis on decision making, seems appropriate for administrators concerned with improving curricula. It concerns the formative aspects of evaluation remedies, a serious deficiency in the Tyler's model. Finally, the detailed guidelines and forms created by the committee provides step by step guidance for users.

However, it has some serious drawbacks also that are associated with it. It's main weakness seems to be it's failure to recognise the complexity of the decision-making process in organizations. It assumes more rationality than exists in such situations and ignores the political factors that plays a large part in these decisions. Also, as Cuba and **Lincoln** (1981) noted, it seems difficult to implement and expensive to maintain.

Curriculum and Instruction

Curriculum Transaction

Curriculum and instruction is a field within education which seeks to develop and implement curriculum changes that increases student's achievement within and outside the school.It is an effective and desired implementation of the curriculum contents, on the basis of aims and objectives listed in the curriculum. It incorporates effective planning for providing learning experiences for its learners, organization of planning, administration of the organized planning and evaluation of the implementations by the implementer and the experts in the relevant field.

Curriculum transaction or curriculum management is the process of planning and organizing the curriculum in a particular subject area for different levels of education and continuously monitoring it while being implemented.

With changing time, curriculum should also change reflecting the needs and aspirations of the people. There cannot be a uniform curriculum for all countries, because education is related to social, economical and political changes in the country. Its content should be based on current information and not on the past information that has been proved to be outdated and unusable. Therefore, there is a need for constantly changing and updating the curriculum's content.

Need and Importance of Curriculum Transaction

Curriculum is a systematic and intended packaging of competencies (i.e. knowledge, skills and attitudes that are underpinned by values) that learners should acquire through organized learning experiences, both in formal and non-formal settings. A noble curriculum plays an important role in the development of thinking skill and acquisition of relevant knowledge that learners need to apply in the context of their studies, daily life and careers.

(Major emphasis should be given on effective transaction of iculur - educational program. The main responsibility of curriculum transaction lies on the teachers and trainers who may use different types of pedagogies, so that students can be benefitted in gaining knowledge and developing skills. in any

Curriculum is implemented by teachers and moreover, depends on the quality of teaching and learning strategies, learning materials and assessment. The set of teaching techniques strongly depends on instructional form of education

Transaction of curriculum is a much difficulut task because it is based on theoretical and practical aspects as well. Two basic considerations needs to be covered while planning transaction processes. One is the context, in which transaction is carried out in terms of physical and social characteristics of the setting. Second, relates to teachers who actually are to transact the curriculum i.e. their capabilities and attitudinal dispositions. These adaptations by teachers

to the changing demands of the physical and social settings, where the curriculum is transacted as well as their own proficiency in various methods of transaction becomes a pre-requisite for making the process of curriculum transaction effective and meaningful.

Instructional System

Students in the educational system are subjected to many situations to learn various things. These situations are developed deliberately by the teacher. Even before thinking about the topic to be learned and how the students will learn, the teachers think as to what will be the objectives that should be attended by the students. Then, only the teacher may think as to what should be the topic/learning experiences to be organized.

To make the students learn, the teachers scientifically select the methods and approaches to teach different material needed for interacting and manipulating by students and teachers. Teacher also thinks about the sequencing of the materials and methods to make the student learn in a scientific process. This scientific process is also known as the instructional system.

Techniques to Enhance Curriculum Transaction

The techniques to enhance curriculum transaction are instructional media, instructional system, instructional techniques and instructional material. They are discussed below

Instructional Media

According to Romiszowski (1988), “It refers to devices and materials employed in teaching and learning. It includes hardware like blackboards, radio, television, tape recorders, video tapes, recorders and projectors, models, maps, etc”. Similarly, Scanean indicates that “instructional media encompasses all the materials and physical means an instructor might use to implement instruction and facilitates student's achievements of instructional objectives. This may include traditional materials such chalkboards, handouts, charts, slides, real objects and video tapes as well as newer materials and methods such as computers, DVDs, CD-Rom(s), internet and interactive video conferencing. It plays a key role in the design and use of systematic instruction",

Advantages of Instructional Media

In general, the advantages of instructional media is to facilitate interaction between teachers and students, so that learning activities can become more effective and efficient :

Advantages of instructional media are :

- The delivery of learning materials can be standardized with the help of instructional media, different interpretations among teachers can be avoided and can reduce the information gap between students, wherever located
- The learning process becomes more clear and interesting. It can display information through sound, image, movement and color, either naturally or manipulatively, thus

helping teachers to create a learning atmosphere becomes more lively, is not monotonous and tedious,

- Improving the quality of student's learning outcomes It can help students to absorb the material and lean more mandalam intact. By listening to verbal information from the teacher only, students do not understand the lesson, but if enriched with activities to see, touch, feel and experience themselves through the media, student understanding will be better.
- It enables the learning process that can be done anywhere and at any time. It can be stimulated in such a way that students can make learning activities more freely anywhere and at anytime, without depending on a Guru. We need to realize that time is very limited to study in school and infact, the most time is being spent outside the school environment.
- It can foster a positive attitude towards students and learning materials. The learning process becomes more attractive that encourages students to love science and love to find their own sources of knowledge.
- It helps the teachers to teach more effectively and enable the students to learn more readily.

Instructional Techniques

They are an integral component of any instructional system. An instructional system is designed to achieve one or multiple objectives. These objectives are achieved

through a combination of various methods or techniques which includes the use of media. A combination of these techniques and materials, employed to achieve a pre-stated objective, is what we call teaching-learning strategies. Broadly, there are four kinds of instructional techniques which are discussed below

Learner-Centered Techniques

In a learner-centered system, the focus is on the individual learner , and the various system's components are geared to help the learner to achieve his/her learning objectives. In general, learner-centered system has the following important icarner-centered teaching-learning techniques

Personalized System of Instruction In the late 1960's, F.S. Keller developed a personalized system of instruction, called the **Keller's Plan**. In his plan, the course materials consist of a number of units. Each unit has its own learning objectives and the learner is supplied with a study guide that suggests a number of means to achieve the stipulated unit's objectives. The units supplied to the learner are self-instructional in nature. So, the Personalized System of Instruction (PSI) is based on the principles of independent study, individualized learning and self-pacing.

Flexi Study It is another significant and popular student-centered technique of instruction. It combines both correspondence and tutorial support in an institution. A learner takes on the

individualized learning materials through correspondence and attends the counseling tutorial sessions as per his/her convenience.

Distance Education In the early stages of distance education, only print materials were used, but now it utilizes multi-media learning strategies. The use of Multimedia Approach enables the system to provide as much support as possible, even to isolated distance learners. These innovations have provided opportunities to the socially disadvantaged population, to further their access to higher education.

Programmed Learning It refers to a procedure of self-instruction, which uses an instructional sequence in which the content to be learned is presented in a series of small steps, arranged in a logical sequence. To facilitate self- learning, programmed instruction materials are designed to give various kinds of intellectual, emotional and psycho-motor experiences to the learners in a controlled situation, through a variety of devices like booklets, teachers, etc.

Computer Assisted Learning In computer assisted learning, the computer helps a learner by indicating whether or not a response given by him/her is correct. Besides this, it can make learning more individualized by taking into account the needs, characteristics, skills, aptitudes and pace of an individual learner. It provides a two way communication and such interaction mainly consists of monitoring and providing feedback for individualized learning,

Group Learning Techniques

Under this, care is taken to stimulate group discussions and other activities within a group to achieve the stipulated educational objectives. They are more suitable than individualized learning techniques for achieving objectives concerned with the development of interpersonal skills, problem-solving skills, oral-communication skills, critical thinking skills, etc.

Various group learning techniques are-

Tutorial It provides students with a chance to express their individual learning difficulties and help the teacher to pay attention to each learner, individually. The teacher selects the topic and puts it for discussion in the group.

Seminar: In a seminar, occasionally, one of the students of a group presents a written essay or talks. The techniques used in the seminar may differ from subject to subject and from one level of education to another. The contents of the presentation are discussed by the group within the frame of their predetermined learning transactions.

Group Discussion In a group discussion, the students are free to ask questions and contribute to the discussion through their comments. Such discussions are used in case of large groups. It is usually used to reinforce the content of the course, already taught through the formal classroom lecture.

Group Project In a group project, a small group is assigned to the task of selecting a problem and conducting a study on it, while carrying out a group project work, skills for group work,

group communication and personal development within the group are given emphasis. The interaction in a group teaches the learner, the basic principles behind adjustment in a societal framework

Experiential Learning Techniques

It can be defined as learning that occurs outside the classroom. It is generally bringing knowledge from society to classroom rather than from classroom to society. Experiential learning implies that learning is highly individualistic and the condition under which knowledge or competency is acquired very widely.

Various experiential learning techniques are-

Discovery Learning It refers to those situations in which the learner achieves the instructional objectives with little or no guidance from the teacher. The effectiveness of discovery Learning as a method, in fact, requires the individual learner to find out the solution to a problem. By implication, the learners themselves arrives at various possibilities independently by applying their skills and then find out the solution. The application of the discovery technique as a method of learning leads to individual capabilities of various kind.

Simulation Technique Simulation means the replication of reality in order to make it easily accessible to the learner. In teaching-learning situations, simulation technique is used in order to make reality, easily accessible to the learner, Thus, in simulated situations, the learner deals with simulated problems through action. The essence of simulation is the involvement of participants (learners) and observers in a specially created situation.

Case Study Technique It is a way of organizing and analyzing the data for the purpose of studying a social unit. In other words, it is a research technique that attempts to examine contemporary phenomena in a real life situation. In distance education, case studies are an important mechanism to obtain feedback from various functionaries and learner to strengthen the teaching-learning system.

Teacher-Centered Techniques

These techniques are largely applied in the conventional face to face classroom setup, where the major part of the instructional transaction is carried out by the teacher, who usually acts as a philosopher and guides to impart knowledge, develops attitude and skills. In the teacher-centered techniques, two methods are quite often used are they are

I. Lecture Method It generally involves one-way communication, where a supposedly learned person explains the subject's complexities to a supposedly motivated audience. It is extensively used in conventional educational situations. In this method, there is a very limited scope for individualized learning.
II. Demonstration Method It is used mainly to develop the psychomotor and manipulation skills of the students. The teacher demonstrator has to handle the sessions carefully so as to provide an adequate individual's attention to each student.

Instructional Materials

Instructional materials are also known as Teaching Learning Materials (TLM), are any collection of materials including animate and inanimate objects and human and non-human resources that a teacher may use in teaching and learning situations to help achieve desired learning objectives. They may aid a student in concretizing a learning experience so as to make learning more exciting, interesting and interactive.

They are tools used in instructional activities, which include active learning and assessment. They encompass all the materials and physical means an instructor might use to implement instruction and facilitate student's achievement of instructional objectives.

They act as support to teachers by providing the language input that they could use in the classroom, to expose their learners to the language. They also supply to the teacher the exercises and activities to give to their students for them to engage in as practice material that will lead them to learn the language. They take on the responsibility of providing material for teaching which will realize the syllabus or objectives of teaching prescribed for the specific level,

They provide the core information that students will experience, learn and apply during a course. They hold the power to either engage or demotivate students. This is especially true for online courses, which rely on a thoughtful and complete collection of instructional materials that students will access, explore, absorb and reference as they proceed in a course.

Therefore, such materials must be carefully planned, selected, organized, refined and used in a course for the maximum effect. selection of The planning and instructional materials should take into consideration, both the breadth and depth of content so that student's learning is optimized.

The instruction materials can broadly be classified as follows

- Projected audio and visual aids.
- Non-projected visual aids.

The **first** category consists of chalk boards, white boards, wall charts, models, flip-charts, handouts, etc, which do not need the use of an optical or electronic projector. The effective use of these tools depends largely on the skills of the teacher.

Wall charts consist of maps, photographs, diagrams, graphs, cartoons, etc. are especially helpful to motivate the students, to initiate a discussion, or to substitute for information storage memory. Flip charts are used during a lecture to reveal key points as and when these are required.

Models are especially useful to present the various dimensions of an object or an event, but these can be used only with a small group of learners because of the fact that these are indistinguishable to a large audience, sitting far away from the teacher's desk. Handouts may

contain printed diagrams, tables, notes, etc. that can be supplied to students to concentrate more on what was said during the lecture.

Curriculum transactions, film strips, projectors, slides and slide projectors, overhead projectors, etc. that might have either front or back projection, belong to the **second category**.The audio-visual aids are prepared and integrated with the lecture. To make them effective, a Lecturer/teacher needs to learn how to prepare and handle them.

For the learners, it is a chance to get relief from the straight forward lecture, and interaction with other media motivates them as well as increases the effectiveness of learning. The functions of audio aids like tape recorders and record players are similar ones.

In learner-centered systems, self-instructional materials play (an important role in providing mediated teaching to the learner, while the teacher only manages and supports the learning process. Varieties of hardware and software like textual materials, audio-visual self-instructional materials, computer based self-instructional materials, etc. are used for individualised learning.

These materials and their roles in individualized instruction/learning care discussed below-

Textual Materials It includes books, structured notes and <textual programmed materials. Books may not generally be (self-instructional in their design, but with the help of a study guide a learner may be advised how he/she should go about learning. In the case of subject areas, textbooks may form an (integral part of such learning, provided they are appropriate din so far as their level and treatment of the subject matter are concerned

Audio-Visual Self-Instructional Materials It consists of audio-visual learning programmes, language laboratories, and broadcast media. In a multimedia instructional programme, such as you in distance learning, besides print, or non-print, self-instructional electronic media are put to use. The multi-media non-print package may include slides, audio and video cassettes, practical kit, etc. These materials aim at achieving the cognitive objective of mastery of a knowledge base, the psychomotor objective of skill acquisition, and the affective objective of attitudinal change.

In essence, we can assume, and to a certain extent ensure a high degree of student's involvement in the teaching/learning activity.

Computer-Based Self-Instructional Materials Computerassisted learning and interactive video can be cited as examples of this type of materials. As far as computer assisted learning is concerned, two modes (namely, the tutorial and the laboratory) of individualized learning are important. In the tutorial mode, the computer plays the role of an instructional device.

Programmed materials are used to react to the responses of the learner and in the laboratory model, the computer can be used to simulate laboratory situations, problem-solving exercises,

and to model's experiments. Computer-assisted learning is a highly stimulating and interactive learning device so far, as individualized learning is concerned.

Interactive video combines computer and video recorder to provide interactive teaching-learning in individualized Learning situations. The computer provides the programme, and the video recorder provides sound and visual displays. The combination and procedure results in rich self-learning materials to meet an individual's learning needs. A later development in this area includes the combination of the video disk with the micro-computer to provide better access and individualisation for the learner.

Approaches to Curriculum and Instruction

An approach expresses a viewpoint about the development and design of the curriculum,the role of the teacher, learner and curriculum specialists in planning the curriculum, the goals and objectives of the curriculum studies and the important issues that needs to be examined.

The two significant approaches are-

Academic Approach

It is sometimes referred to as the traditional, synoptic, intellectual or knowledge oriented approach. It tries to analyze and synthesize major positions, trends, and concepts of the curriculum. It tends to be historical or philosophical or to a lesser extent social in nature. In this approach, the discussion of curriculum making is usually scholarly and theoretical, (not practical, and concerned with many broad concepts or aspects of schooling) and the treatment of curriculum as an intellectual thought are reflected in a good deal of background information and a broad overview of events and people.

It is rooted in the philosophical works of John Dewey, Henry Morrison and Bonoyd Bode. It became popular in the 1930's and 1950's.

During this period, new topics related to curriculum expanded the boundaries of the field to include a good number of trends and issues and the integration of various instructional, teaching, learning, guidance, evaluation, supervision and administrative procedures. However, after the 1950's, the Academic approach lost some of its glamor among curricularists. is when its major interest in curriculum centered on the structure of the discipline and qualitative methods.

Advantages of Academic Approach

- Logical arrangement of educational content in there in this approach
- It mainly focuses on the academic subjects and use of qualitative methods.

Disadvantages of Academic Approach

- It lacks tools of teaching

- Curriculum is not practical in nature,

Competency Based Approach

It is an approach to education that focuses on the student's demonstration of desired learning outcomes as central to the learning process. It is concerned chiefly with a student's progression though curriculum at their own pace, depth, etc. As competencies are proven, students continue to progress. It is similar to mastery based learning, with the primary difference being that competency based learning often focuses on observable skills or competencies, while mastery based learning may be academic as likely to focus on concepts and skills.

In this approach, students are not allowed to continue until they have demonstrated mastery of identified competencies (i.e. desired learning outcomes to be demonstrated). It's strength lies in its flexibility, as learners are able to move at their own pace. This supports students with diverse knowledge backgrounds, literary levels and other related aptitudes. It can be an effective model as it is potentially reducing inefficiency and increasing pedagogical precision and student's achievement.

So, a competency based curriculum emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitude to be applied by learners) rather than mainly focusing on what learners are expected to learn about, in terms of traditionally defined subject's content. In principle such a curriculum is learner-centered and adaptive to the changing needs of students, teachers and society.

The advantages of competency based is that in this the emphasis is not placed upon the learner's accumulation of memorized knowledge or behavior, but instead on their proficiency in a particular realm. It has certain disadvantages too, it works well with some learning environments and less with others. It does not suit subject areas where it is difficult to prescribe specific competencies or where new skills and new knowledge need to be rapidly accommodated. It ignores the importance of social learning. It does not fit with the preferred learning styles of many students.

Curriculum Evaluation

Curriculum is a system of learning experiences, deliberately designed and transacted for realising certain goals. On the other hand, **evaluation** is a systematic process of determining and appraising the proficiency level of a system or a practice. When evaluation is applied to curriculum, it focuses on discovering whether the curriculum as designed, developed and implemented, is producing or can produce the desired results, Evaluation serves to identify the strengths and weaknesses of the curriculum before implementation and the effectiveness of it's delivery after implementation.

Evaluation of curriculum is an integral and essential part of the whole process of curriculum development. It is a continuous activity and not a 'tail end process'.

It refers to an ongoing process of collecting, analyzing, synthesizing and interpreting information and understanding what students know and can do. It refers to the full range of information gathered in the school district to evaluate (make judgements about) student's learning and program effectiveness in each content area. It must be based on information gathered from a comprehensive assessment system that is designed for accountability and committed to the concept that all students will achieve at high levels, is standard based and informs decisions which impact significant and sustainable improvements in teaching and student's learning Bruce Tuckman (1979) has defined curriculum evaluation as “The means for determining whether the programme is meeting its goals i.e. whether the measures/outcomes for a given set of instructional inputs matches the intended or pre-specified outcomes".

So, evaluation enables educators to identify alternative curricular actions and determine various combinations of curriculum to ensure maximum student's learning in the light of overall programme's goals.

Approaches to Curriculum Evaluation

Evaluation may be considered as a broad and continuous effort to find out the effects of implementing content and procedures to achieve pre-set goals. It is not content specific but it is a methodological process.

Approaches to curriculum evaluation are-

Scientistic and Humanistic Approaches

Cronbach (1982) has identified two approaches to evaluation i.e. the Scientistic Ideals Approach and the Humanistic Ideals Approach. He has presented these two approaches at the two ends of evaluation. The scientific end advocates experimentation and the humanistic end does not have faith in experimentation.

Scientific approach, in scientific approach all efforts are focused on the learners. Student's achievements in different situations are compared by the way of test scores. Quantitative measures are adopted for data collection and statistical tools are employed for data analysis,

Humanistic approach would study a program already in place, not one imposed by the evaluator Analysis of data, collected through this approach differs significantly from that collected through Scientistic Approach. It is more qualitative and the techniques employed are basically observation, interviews, personal meetings and discussions with participants.

Intrinsic and Pay-Off Evaluation

Intrinsic evaluation of curricula implies that evaluators study the content, it's sequence, organization, accuracy, learning experiences provided, etc. They believe that with accurate

content and organization student's learning would be stimulated. Most of the time, evaluators tend to neglect the concept of intrinsic evaluation.

According to Scriven, pay-off evaluation occurs when the effects of the delivered curriculum are examined and it's worth has been established. The effects of the curriculum on learners can be determined since this evaluation involves judgements based on pre-test, post test, scores or experimental group tests and other parameters.

Formative and Summative Evaluation

Formative evaluation aims to improve an existing programme based on the feedback obtained from the evaluation. Hence, programme developers must be frequently provided with detailed and specific information, to guide them in the developmental phase. On this basis, evaluators can revise the programme while it is being developed, before it can be implemented on a large scale. Formative evaluation can occur at several stages during the curriculum development process. At any stage, the validity of the content can be checked, i.e. whether students are achieving the stated goal, if not, then that content could be modified.

Summative evaluation assesses the effect of a complete programme. It is carried out at the end of an educational programme. This type of evaluation is based on the evidence about summed effects of various components in the curriculum. The people involved in the curriculum process can conclude how successfully the curriculum has worked. It uses formal tools for gathering data. One of the main purposes of summative evaluation is to select from several competing curricular programmes, the one, which should be accepted, and those which should be discontinued.

Models of Curriculum Evaluation

Tyler's Objectives-Centered Model

One of the earliest curriculum evaluation models, which continues to influence many assessment projects, was that proposed by **Ralph Tyler (1950)** in his monograph Basic Principles of Curriculum and Instruction Tyler's approach moved rationally and systematically through several related steps. They are

- Begin with the behavioral objectives that have been previously determined. Those objectives should specify both the content of learning, and the student behavior expected ie demonstrate familiarity with dependable sources of information on questions relating to nutrition
- Identify the situations that will give the student the opportunity to express the behavior embodied in the objective and that evoke or encourage this behavior. Thus, if you wish to assess oral language use, identify situations that evoke oral language
- Construct Select modify 05 suitable evaluation instruments and check the instruments for objectivity. reliability, and validity,
- Use the instruments to obtain summarized or appraised results.

- Compare the results obtained from several instruments before and after given periods in order to estimate the amount of change, taking place
- Analyze the results, in order to determine strengths and weaknesses of the curriculum and to identify possible explanations about the reason for this particular pattern of strengths and weaknesses. .
- Use the results to make the necessary modifications in the curriculum .

He maintains that evaluation is a recurring process and that evaluation feedback should be used to reformulate or redefine objectives. In other words, information gathered could be plowed into the system, to modify the objectives and the programme, which is being evaluated. This recording process keeps the evaluation system, dynamic

Advantages of Tyler's Model

- It is relatively easy to understand and apply.
- It is rational and systematic.
- It focuses attention on curricular strengths and weaknesses, rather than being concerned solely with the performance of individual students.
- It also emphasizes the importance of a continuing cycle of assessment, analysis and improvement.

Disadvantages of Tyler's Model

As Guba and Lincoln (1981) pointed out, however, it suffers from several deficiencies. They are

- It does not suggest how the objectives themselves should be evaluated.
- It does not provide standards or suggests how standards should be developed.
- Its emphasis on the prior statement of objectives may restrict creativity in curriculum development and it seems to place undue emphasis on the pre-assessment and post assessment, ignoring completely the need for formative assessment.

Similarly, Baron and Boschee (1995) in their book Authentic Assessment, the key to unlocking student's success states that "We are encountering fundamental changes in the way we view and conducts assessment in American schools and sixty years have been passed since we experienced such deep-seated and thoughtful re-evaluation of our assessment methods".

Scriven's Goal Free Model

Scriven was the first to introduce the concept of **Goal Free Evaluation Model**. It is not a comprehensive stand alone evaluation model; rather it is considered either a perspective or position concerning an evaluator's goal orientation throughout an evaluation or a technique or tool for evaluating without referencing goals. According to Scriven, Goal Free Evaluation Model is methodologically neutral which means that it can be used or adopted for use with various other evaluation approaches, models and methods as long as the other approaches do not mandate goal orientation.

In conducting a goal free evaluation, the evaluator functions as an unbiased observer, who begins by generating a profile of needs for the group served by a given program. (Scriven is somewhat vague as to how this needs to be derived). Then, by using methods that are primarily qualitative in nature, the evaluator assesses the actual effects of the program. If a program has an effect that is responsive to one of the identified needs, then the program is perceived as useful. Obviously. His main contribution was to redirect the attention of evaluators and administrators to the importance of unintended effects i.e. a redirection that seems especially useful in education.

If a mathematics program achieves its objectives of improving computational skills but has the unintended effect of diminishing interest in mathematics, then it cannot be judged completely successful. His emphasis on qualitative methods, also seemed to come at an opportune moment, when there was increasing dissatisfaction in the research community with the dominance of quantitative methodologies.

However, he himself notes, goal-free evaluation should be used to complement, not supplant goal based assessments Used alone, it cannot provide sufficient information for the decision maker. Some critics have faulted him for not providing more explicit directions for developing and implementing the Goal Free Model, as a consequence, it probably can be used only by experts who do not require explicit guidance in assessing needs and detecting effects.

It has certain advantages and disadvantages. The goal free model allows evaluators to be attentive to a wider of program's outcomes rather than just link for the program's results that are stuck to the program aims/goals. It can be used to supplement goal based evaluation. The goal free model has a long history, it has remained conceptually abstract and highly theoretical with very few practitioners. Goal Free Evaluation model has been criticized for the lack of operation by which to conduct it,

Stake's Responsive Model

Robert E. Stake in 1970 created a system for carrying out evaluation in education. It was then developed with the name Stake's Responsive model. In the Responsive Model, the evaluator is a full subjective partner in the educational program who is really involved and interactive. The evaluator's role is to provide an avenue for continued communication and feedback during the evaluation process. According to Stake, there is no single true value to anything, but the value is in the eye of the beholder. This means that there may be many valid interpretations of the same events based on a person's point of view, interest and belief. The duty of the evaluator is to collect the views, opinions of people in and around the program.

Stake recommends an interactive and recursive evaluation process that embodies these steps

- The evaluator meets with clients, staff, and audiences to gain a sense of their perspectives on and intentions regarding the evaluation.
- The evaluator draws on such discussions and the analysis of any documents, to determine the scope of the evaluation project.

- The evaluator observes the program closely, to get a sense of its operation and to note any unintended deviations from announced intents. .
- The evaluator discovers the states and real purposes of the project and the concerns that various audiences have about it and the evaluation.
- The evaluator identifies the issues and problems with which the evaluation should be concerned. For each issue and problem, the evaluator develops an evaluation design, specifying the kinds of data needed.
- The evaluator selects the means needed to acquire the desired data. Most often, the means will be human observers or judges.
- The evaluator implements the data collection procedures.
- The evaluator organizes the information into themes and prepares portrayals that communicate in natural ways, the thematic reports. The portrayals may involve video tapes, artifacts, case studies, or other faithful representations
- By again being sensitive to the concerns of the stakeholders, the evaluator decides which audiences require which reports and chooses formats, most appropriate for given audiences (as cited by Galtthorn, 1987, pp. 275-276).

Clearly, the chief **advantage** of the Responsive Model is it's sensitivity to clients, by identifying their concerns and being sensitive to their values, by involving them closely • throughout the evaluation, and by adapting the form of reports to meet their needs.

The model, if effectively used, should result in evaluation of high utility to clients. It also has the virtue of flexibility. The evaluator is able to choose from a variety of methodologies, once client concerns have been identified. Its chief disadvantage would seem to be its susceptibility to manipulation by clients, who in expressing their concerns might attempt to draw attention away from weaknesses that they did not want to expose.

Kirkpatrick's Model

It was developed by Dr Donald Kirkpatrick (1924-2014) in the 1950's. It can be implemented before, throughout the following training to show the value of training to the business. As outlined by this system, evaluation needs to start with level 1, after which as time and resources will allow, should proceed in order through level 2, 3 and 4. Data from all of the previous levels can be used as a foundation for the following levels analysis. As a result, each subsequent level provides an even more accurate measurement of the usefulness of the training course, yet simultaneously, causing a significantly more time consuming and demanding evaluation. It has been used for över 30 years by many different types of companies as the major system for training evaluation. It is evident that Kirkpatrick's vision has made a positive impact on the overall practice of training evaluation.

The four levels of Kirkpatrick's model are

Level1: Evaluation-Reaction

The objective for this level is straightforward, it evaluates how individuals react to the Training Model, by asking questions that establish the trainee's thoughts. As outlined by Kirkpatrick, each program needs to be assessed at this level, to help improve the model for future use. On top of that, participants' responses are essential for determining how invested they will be in learning the next level. Even though an optimistic reaction does not ensure learning, an unfavorable one definitely makes it less likely that the users will pay attention to the training.

Level 2: Evaluation-Learning

Evaluating at this level, means to gauge the level participants have developed in expertise, knowledge of mind set Exploration at this level is far more challenging and time-consuming as compared to level one techniques vary from informal to formal tests and self-assessment of at all possible, individuals take the test or evaluation prior to the training, the following training (post test) to figure out how much the participant comprehended.

Examples of tools and procedures, at level 2 are-

- observations by peers and instructors.
- strategies for assessment should be relevant to the goals of the training program.
- a distinct clear scoring process needs to be determined, in order to reduce the possibility of inconsistent evaluation reports.

Level 3: Evaluation-Transfer

It analyzes the differences in the participant's behavior at work, after completing the program. Assessing the change, makes it possible to figure out if the knowledge, mindset or skills, the program taught are being used at the workplace. For the majority or individual, this level offers the truest evaluation of a program's usefulness. Testing at this level is challenging, since it is impossible to anticipate when a person will start to properly utilize what they have learned from the program, making it more difficult to determine when, how often and exactly how it evaluates a participant's post assessment. It starts within 3 to 6 months after training

Examples of assessment resources and techniques for level 3 are-

- It can be carried out through observations and interviews.
- Observations should be made to minimize opinion based views of the interviewer, as this factor is too variable which can affect consistency and dependability of assessments.

Level 4: Evaluation Result

Commonly regarded as the primary goal of the program, it determines the overall success of the Training model by measuring factors such as lowered spending, improved and higher quality of products.

Advantages of Kirkpatrick's Model

- It is probably the best known model for analyzing and evaluating the results of training and educational programmes.
- It takes into account any style of training, both formal and informal to determine aptitude based on four level criteria.
- It provides opportunity to learner to demonstrate learning transfer
- It provides more objective feedback.
- It is relatively simple to understand.
- It presents a useful taxonomy for considering the impact of training programmes at different organizational levels.
- The model provides a logical structure and process to measure learning

However, the model has certain disadvantages too that it does consider the wide range of individual, organizational and training design.

Approaches to Curriculum Change

Curriculum approach is a way of dealing with curriculum, a way of doing, creating, designing and thinking about the curriculum. There are various approaches to curriculum change namely, Bottom-Up approach, Systematic and Panic approach and Appreciative Inquiry approach. In curriculum change, the teachers, students and educational administrators play a very important role.

Curriculum Change

Curriculum change means making the curriculum different in some way, to give it a new position or direction. This often means alteration to its philosophy by way of its aims and objectives, reviewing the content included, revising its methods and rethinking it's evaluatory procedures. Change in terms of currículum involves adapting a new educational method. When change is made in the classroom, it can enhance the social skills of students and focus on unique methods for teaching historical, technological, organizational and political lessons. An innovative curriculum relies on students to make discoveries with an instructor, present to serve as a mentor or guide instead of taking the role of the expert who controls the learning

Suarez Orozco (2007) suggests that “Teachers should recognise the opportunity to enhance the contemporary relevance of their curriculum. The curriculum planners and teachers could attempt to infuse problem based learning and critical thinking in the school curriculum”.

Some of the suggested ways to reform the curriculum and teaching are discussed below

- A student-centered approach that stressed the active acquisition of knowledge through experience. Inquiry based learning and problem-solving activities in designing the curriculum.

- Curriculum and pedagogy should be capable of developing high order thinking skills and other capacities that are pertinent to the lifelong process of learning.
- Curriculum should be developed with a process approach, which uses the experience and interest of students as the basis for content selection.
- An interdisciplinary approach should be adopted to integrate knowledge into all disciplines.
- Multicultural issues, differences in gender, intelligences and other kinds of diversity in the classroom must be considered.
- Constructivist pedagogy, such as knowledge building through computer networks must be encouraged.

Thus, the process of curriculum change is defined as permissiveness and support in accordance with a helpful improvement in a curriculum with adequate use of resources".

Types of Curriculum change

There are broadly two types of curriculum change and they are classified as below :

1. Hardware change This change is generally composed of introduction of new classrooms, Books, educational equipment, overall structure, etc.
2. Software change This change affects the content of the curriculum and it is related to the methods of delivery of curriculum. There are several categories of curriculum changes that are discussed below

    - **Substitution** The current curriculum will be replaced or substituted by a new one. New textbooks, equipment, replacement of teachers and administrators.

    - **Alteration** Minor changes to the current or existing curriculum rather than complete replacement of the whole curriculum, syllabus or course of study.

    - **Restructuring** It is building new structures that would mean major modifications in the school system, degree program or educational system. Sharing of resources among a group of schools or institutions.

    - **Addition** Introduction of new components without changing the old elements. e.g. audio-visual aids.

    - **Value Orientation** A type of curriculum change that was classified to respond to shifts in the emphasis that the teacher provides which are not within the mission or vision of the school or vice-versa.

Factors Affecting Curriculum Change

There are various factors that affects curriculum change as discussed below-

Political Factors

Politics influences curriculum design and development starts with funding. Both private and public educational institutions rely on funding for hiring personnel, building and maintaining facilities. Politics has tremendous influence on the education system as it determines and defines the goals, content, learning experiences and evaluation strategies of education Curriculum materials and their implementation usually influenced by political considerations. Technological Factors

The intention is to equip the learners with the requisite computer skills and knowledge. In addition to computers, other forms of electronic media are being used in teaching. Technological multi-media influences educational goals and learning experiences among students. So, change in technology also leads to curriculum change.

Social Factors

To fulfill the societal needs as society has it's own expectations about the aims and objectives that should be considered while designing the curriculum. Developing relevant curriculum takes into account society's expectations, accommodating group traditions and promoting equality.

Economic Factors

Curriculum planners should try to establish a closer relationship between education and economic development, which are to a larger extent inter-dependent on each other. An industrial country like England gives emphasis on technical and industrial education because the economy of that country is based on industrial production. So, depending upon the demand for certain skills in the market and technology available to the people, curriculum could be used to prepare children for the workforce of the future. For instance, many schools have decided to phase out workshop programs in favor of the more modern technology programs because the local economies had little demand for those types of skills.

General Factors

It includes the following

- Student limitations to understand the content.
- Professional accreditation needs. .
- University or government requirement,

Approaches to Curriculum Change

Approaches to curriculum change are as follows-

Bottom-Up Approach

This approach is seemingly more favored in the emerging paradigm of curriculum. The term bottom-up is also referred to as Grassroots Approach. It suggests that the process of curriculum receives its initial momentum from the bottom/root of the structure of educational institutions, at the level of teachers and learners. The seed for development emerges from the actual site of action, the classroom. The pressure comes from the teachers and the learners who have immediate experiential access to the day to day factors influencing the effectiveness of the existing curriculum. In this case, the curriculum can be seen as the consequence of a deliberate collaborative enterprise involving the teachers, learners, subject matter and the situational context or environment. The teachers and learners are recognised as the actual creator of the curriculum.

Bottom-Up approach gave more consideration to the needs of the learners and curriculum based on this approach is dynamic, emergent, rich, self-organized, open and existentially realized by the participants.

Beale (2002) reminds us that in the process of designing change, "it is important to avoid imposing a foreign teaching method, without consideration of the existing cultural characteristics and constraints within which it must be applied". It was hoped that the introduction of more communicative methods into a curriculum would create a balanced approach.

Systematic and Panic Approach

A systematic way of reviewing a curriculum involves needs assessment, planning, design, teacher's training, material's preparation, modification, implementation, monitoring, feedback and evaluation.

Tyler offers a systematic way of developing curricula and instruction. He uses four questions that seeks to determine objectives, work out learning experiences, select and organize learning experiences so as to attain specified outcomes and provides a program to evaluate outcomes.

The **Panic approach** according to **UNESCO-IBE (1999)** is caused by a situation where local or international pressures cause rapid decisions to be made to structured planning.

From the above descriptions of the Panic Approach, it seems that the approach is reactive rather than proactive, that it is preferred where curriculum decision makers are under pressure to provide instant solutions to educational problems or situations that unlike the Systematic Approach. It minimizes the tasks like wide consultation, situational analysis and thorough preparation for implementation.

Appreciative Inquiry Approach

The term appreciative inquiry was first coined by David Cooperrider and Suresh Srivastava. It is a powerful approach that builds on the positive core of organization in both action planning and

transformational change. It helps people to create vision for a system based on people's personal experiences, expertise, knowledge and skills.

According to this approach, curriculum change will come about as a result of a highly interactive process that brings people from all levels of institution together to learn from one another and with another, building relationships and expanding collective wisdom. Through this approach, during the curriculum design phase academic staff identifies key facts of institutional systems and structures that will be needed to support the realization of their collectively generated new or revised curricula. The Appreciative Inquiry approach creates transformative learning experiences for both educators and students.

Role of Teachers in Curriculum Change

The role of a teacher in the process of curriculum change is that of an expert from the discipline. Their knowledge has to be updated to support and assess the students in new authentic tasks. It is widely acknowledged that the teachers are key actors in curriculum innovation, Curriculum innovation usually requires a change in teacher's practice. However, experienced teachers do not tend to change their current practice easily because it is rooted in their beliefs and in the practical knowledge they have accumulated during their years of teaching. To accomplish change in teaching practice, teachers should not only implement innovation, but they should also become actively involved in the development of innovation. In general, it is assumed that the teachers develop co-ownership of new curriculum when they are actively involved in it's development.

Role of Students in Curriculum Change

Students have their own knowledge and skills, which they have constructed through learning experiences. The issue of getting students involved in curriculum planning is not new. It can be traced far back to the idea of Kilpatrick and Rugg, child-centered culturalists who outlined the role and concepts of curriculum, making that involve students in planning themes, units, lesson's plans and school's projects that allowed for considerable student's input. Ornstein and Hunkins further consider students as a most important source for curriculum development.

They contend that students should have a voice in curriculum development and change. Their input is important in it's own right, but allowing them to participate in curriculum development also empowers them and encourages them to take responsibility for matters that concern them. So, change in curriculum equips students for the challenging world of the 21st century, and needs to ensure that students are supposed to take increasing responsibility for their own learning.

Role of Educational Administrators in Curriculum Change

Successful educational administrators value high standards. clarity in communication and transparency in authentic professional relationships to implement and sustain curriculum change and improve student's development and achievement. They play a significant and direct

role to influence on student's learning. They supervise and monitor teaching and learning in the school, facilitate the development of successful goals and build a culture dedicated to continuous improvement of teaching and learning.

Curriculum Research

Curriculum research is a systematic attempt to gain a better understanding of all components of the curriculum.

The research attempts to understand the current state of curricular thinking in schools and universities. It tries to find out that substance of education i.e. knowledge, skills and progression and more important aspects in designing a qualitative curriculum. Educators must review the curriculum on a timely basis and make intelligent use of assessment in curriculum designing and planning.

The research design is based on two main core principles

- Developing a valid research model of the quality of education, covering the intention, implementation and impact of the curriculum.
- Designing an approach that focused on the collection of first hand evidence in the quality of education.

Scope of Curriculum Research

Research in curriculum is difficult primarily because the term curriculum refers to everything of importance in education but specifies very little in particular. Research is an in depth inquiry into a problem which needs an amicable solution. Curriculum research requires a lot of expertise with respect to its planning, designing, implementation and processing.

The scope of curriculum research is very broad in nature as it involves invention of new teaching methods, curriculum transaction strategies, effective use of teaching aids, building new knowledge, regarding the methodology. Specifically, scope refers to the breadth of the curriculum, the organizing threads that constitute the skills and content that teachers are expected to include in their instruction.

Types of Research in Curriculum Studies.

Following are the types of research in currículum studies

Experimental Research

Experimental research is a method used by researchers through manipulating one variable and controlling the rest of the variables. The process, treatment and program in this type of research are also introduced and the conclusion is observed. The aim of experimental research is to predict phenomena. In most cases, an experiment is constructed so that some kinds of causation can be explained.

Experimental research is helpful for society as it helps to improve everyday life. Here, the problems are identified and accordingly the problem is resolved with regard to the curriculum. Under this research, the changes in the currículum are made so that in the teaching-learning activity the basic problems of the students are resolved. In this research, the emphasis is laid on experimentation. In this research, the basic changes can be made in the curriculum.

Fundamental Research

Fundamental research can be stated as pure research It's purpose is to develop theories by discovering broad generalization and principles. It has little to do with the application of findings. This type of research has interested the doctoral candidates, and only a small portion of teachers who have been casual rather than active consumers are participants in the research.

In this type of research, the teacher studies various aspects and then incorporates them accordingly. Under fundamental research, the curriculum is made learner-centered so that the students could understand the topics easily. In the development of curriculum the role of teacher is of utmost importance. Under fundamental research, the problems are identified first then it is analyzed and accordingly the problems are resolved.

Action Research

It was initiated in the early 1940s by Kurt Lewin. Underlying the Action Research Approach, one finds important assumptions about the nature of research and of knowledge itself. The investigators are not passive observers whose sole interest is to collect data, they look for causes and make generalizations which can be converted into recommendations.

Objectives of Action Research

- To improve the practices going on in the schools,
- To make teachers and educational administrators research minded
- To make the environment of the school more conducive for effective teaching and learning.

In action research, the changes in curriculum are made 'on the spot' or ‘of the spot' . While conducting such research the interest of students and teachers are considered. The action research is a process where the teacher analyzes his teaching and tries to improve his teaching methods. Through action research the curriculum is made qualitative and effective.

Search Conference

It is a method of participatory planning which enables a group of people to identify and discuss problems and plan future action. As a planning technique, a search conference reverses the traditional planning approaches by encouraging democratic participation of the entire group. It has been used within success in curriculum development.

Questionnaire Surveys

The questionnaire technique involves collecting primary data through the selection of an appropriate sample from the population and entails the development of structured sets of questions on specific issues. A thorough search of secondary sources is required to ensure that all existing data has been discovered prior to developing a questionnaire. It is a flexible method of obtaining information. So, data can be collected in the form of questions from the teachers as well as learners and that will help to improvise the curriculum.

Conclusion

To conclude, we can say that curriculum change is a process of restructuring for both the teachers as well as students. It is a necessary perspective as it helps in including new areas and concepts which were not taken into account. Curriculum should be comprehensive in it's approach so that it will serve as a guideline for school improvement. Essential reforms and changes in the curriculum will help both the educators and learners to enrich and achieve their goals.