CHAPTER 6
THE DISCIPLINE OF EDUCATION

6.1.0 Introduction

Richard Peters, in his inaugural lecture as professor of philosophy of education at the Institute of Education, London, in 1963, insisted that ‘education is not an autonomous discipline, but a field, like politics, where the disciplines of history, philosophy, psychology, and sociology have application.’ Similarly, in his classic 1966 paper Hirst argued that educational enquiry ‘is not itself an autonomous “form” of knowledge or an autonomous discipline. It involves no conceptual structure unique in its logical features and no unique test for validity. Such validity, in educational research and enquiry, was to be found in forms of knowledge grounded elsewhere in the academy – in philosophy, psychology, sociology and history in particular.’ In a similar way, Dearden (1970) questions the disciplinary status of education by saying, ‘I do not know quite what an “educationist” is, or what sort of expert or authority he is supposed to be. I know what a philosopher of education is, or an educational psychologist or an educational sociologist, but I am not at all sure what a plain “educationist” would be.’ Many of us are surprised by our early encounters with educational studies. In schools, we study math, science, history and other subjects but not usually the education process itself. Therefore, we may be unsure of what to expect when beginning study of process of education as a subject in its own right. Where an academic discipline or field of study is well established, properly organized and intellectually respectable, we need not to encounter with such questions. However, condition is not the same with the study of education. It is still not clear whether “education” is an academic discipline in its own right or merely a field to which other academic disciplines bring their specialized knowledge and skills. Education is not viewed as a ‘discipline’ in the sense that it had its own distinctive conceptual frameworks and methods of validation. The intellectual crisis has a number of manifestations. For example, it is not clear whether teaching is a profession or a trade. It is not settled, even among educators themselves, whether teaching is a craft that is best taught by example or a profession with a coherent theory at its core. The problem is that teaching, as a form of educational enquiry, is not viewed as
constituting a disciplined form of knowledge. Studying, practicing and researching education is considered at the lowest position in the intellectual hierarchy. Therefore, it is necessary to find a suitable place for education in the academic world. With this intention, in this chapter, education as a field of study is analyzed on different characteristics of a discipline. The term education has multifaceted meaning. Therefore, before analyzing ‘nature of education as a discipline’ it is necessary to analyze meaning of the term ‘education’ first.

6.2.0 Meaning of Education

In English, the term “Education” has been derived from Latin words Educare, Educere and Educatum. The term “Educatum” denotes the act of teaching. It also means to train or mold. The terms Educare and Educere mean to bring up, to lead out, to draw out, or propulsion from inward to outward. These all terms mainly indicate development of the latent faculties of the child. In Indian viewpoint, the term “Siksha” has come from the Sanskrit word “Shiksh”. “Shiksh” means to acquire knowledge or to make others learn or attain knowledge.

The term education stands for both the study of the field and for the formal enterprise (or system) that is being studied. To understand this dual meaning, consider two definitions of education. The first is a standard definition from American Heritage Dictionary:

(i) The act or process of educating or being educated.
(ii) The knowledge or skill obtained or developed by a learning process.
(iii) A Program of instruction of a specified kind or level.
(iv) The field of study that is concerned with the pedagogy of teaching and learning.
(v) An instructive or enlightening experience.

The second is from the essay on “Education” by William Frankena in the Dictionary of the History of Ideas:

(i) As the activity of one doing the educating, the act or process of educating or teaching engaged in by the educator.
(ii) The process or experience of being educated or learning that goes on in the one being educated.

(iii) As the result produced and in the one being educated by the double process of educating and being educated.

(iv) As a discipline or study of education.

From these definitions, it is clear that the term ‘Education’ is used in three senses: Knowledge, Subject and Process. In the first sense, all formal and informal knowledge gained by an individual during his lifetime is termed as his education. When a person achieves degree up to certain level, we do not call it education. As for example, if a person has secured Master Degree then we utilize education in a very narrower sense and call that the person has achieved education up to Masters Level. In the second sense, education is used in a sense of discipline. As for example if a person had taken education as a paper or as a discipline during his study in any institution then we utilize education as a subject. As a field of study education is a contemplative search for theory and science of the process of educating. In the third sense, education is used as a process. In fact when we talk of education, we talk in the third sense i.e. education as a process. As an enterprise it contains various systems of education and, therefore, primarily an activity. However, in this study we are dealing only with second meaning of education i.e. education as a subject or discipline that is taught at various levels. The subject relates itself to preparation of educators and study of teaching learning conditions. Most precisely the discipline of Education can be defined as the study of process of educating. It studies various factors, methods and elements involved in the process of educating. It also studies various principles and ideas govern this process. A major purpose of the education as a field of study is to help to understand and improve the enterprise. As an activity, the education enterprise is highly complex. Its immediate purpose relates to the intellectual, moral, social, and physical development of our students, and its functions, socially and civically, to maintain and improve a democratic way of life, such complexity, with competing goals and values, requires strong analytical thinking and understanding so that the system is operated in a thoughtful and effective way. Therefore the discipline of education has been designed to prepare scholars who are responsible for both the field of study of education and the education enterprise.
6.3.0 Education as a Discipline

Education is a relatively new discipline that combines aspects of Psychology, history, philosophy, sociology and some practical studies. Its domain is the whole complex of process of educating. The discipline of education is nowadays a compulsory subject used for educating teacher educators. Education is, of course, also a field of research that aims to understand the process of education. The main problems and questions education deals with: what content should be taught to pupil and students (the question of curriculum)? How should the content be taught (the question of teaching method)? What other educational goals shall be pursued in addition to teaching knowledge and skills (the question of values)? In other words, education has to answer the questions of truth, learning and morals. It has to reflect on the higher goals of education beyond passing on random knowledge and skills. The ‘study of education’ would be the reflexive effort of looking at the reality of education and trying to understand how it is practiced.

This is a serious question that whether education can be called a discipline, and there are three schools of thought on the subject. The first suggests that since education borrows from and combines with other, more traditional, disciplines and often focuses on practice, it should not be called a discipline but a field of study or a second-level discipline. Using the same rationale (that many areas within education bring together a traditional discipline within an educational frame), the second school of thought calls education an “inter-discipline.” In addition, education has its own set of problems, questions, knowledge bases and approaches to inquiry; a third school of thought pushes for accepting education as a discipline.

One reason for the lack of consensus around the use of 'discipline’ for education is that as a field of study, education may be seen as one of a set of academic program anomalies in which enterprise itself is primarily an activity. Within universities, this includes schools and colleges that are considered “professional schools”: engineering, nursing, medicine, law, social work. In the words of Klein 1990, “We could say that education, as a professional school, is a second-level discipline in that it focuses on a unique activity-education- by borrowing, considerably, from many traditional
disciplines. Looking specifically at areas in education that bring together a traditional discipline and education, we could use the term inter-discipline to describe education. Considering education as an inter-discipline suggests that the work of scholarship in education should focus on bringing together the disciplines as a means of solving problems and answering questions that cannot be satisfactorily addressed using single methods or approaches.

At this point, it would be well worth examining education as a discipline. Not only does education have its own set of problems, questions and knowledge bases, and approaches to enquiry but also that which is borrowed from other disciplines often becomes transformed within the study of education. To evaluate education on different criteria of a discipline, objectives of studying education as a discipline should be considered first because objectives of study delimit and decide the nature and scope of any field of study. After that, other disciplinary characteristics of education will be discussed and analyzed.

6.4.0 Objectives of studying Education

Academic study of any discipline not only purports to develop an understanding of nature, essential facts, principles and concepts of any discipline, but also intends to develop discipline specific outlook of its scholars. Each discipline plays a different role to serve the society. To play this role effectively it develops its scholars with necessary potential and vision to serve their role as the scholars of the discipline effectively.

Generally, the main purpose of the study of education is considered to guide the whole process of formal education that includes teaching - learning and organization of schools. However, this approach makes the discipline of education of little value. It limits the scope of the study of education just to solve the problems of immediate concern. The discipline of education just not relates itself to educating in schools but also studies the concept of education as whole. The complex concept of education is not limited to schooling only, as also put by Kneller in the preface of his much-cited book ‘Foundations of Education’. In his words, “the first task of general study of education is to produce an understanding of education rather than a practical
competence in teaching or academic tradition.” Therefore, the aim of study of education should be to inculcate a general understanding of education that is applicable to all educational issues and problems of immediate as well as future concern.

As a process, education has many fold objectives from development of an individual to the development of the whole society. It has been mentioned earlier that broadly discipline of education can be defined as the study of the process of education. The aim of the study of the process of education is the evaluation and the improvement of this process. To fulfill this broad aim many objectives are framed for the study of education. The study of education prepares the educators and researchers who understand the principles, factors and components to guide and control the process of education. Who understand the importance of process of educating in the development of individuals as well as the society and thereby produce effective teachers and researchers to carry on this process well.

There are various programs and levels of academic study of education. The primary focus of B.Ed. is preparing teachers for secondary schools. It is also seen as an initial professional degree for those who may wish to pursue further studies and professional specializations in administration and management of institutions and systems, policy making and planning, curriculum development, managing examinations, developing textbooks, guidance and counseling, working in alternative school systems, teacher education and educational research. The Master of Education (M.Ed.) programme is a crucial step in the preparation of Educational Researchers, Educational Administrators and Teacher Educators. The M.Ed. scholars apart from receiving rich grounding in Educational theory are encouraged to study and research in diverse areas of Education (such as Special Education, Mental Health Education, Educational Administration, Science and Social Science Education, Teacher Education, Educational Technology and Curriculum and Pedagogy). In addition to professional courses of B.Ed. and M.Ed., courses of academic study like B.A. and M.A. in Education are also popular in education. Their course content is almost similar to B.Ed. and M.Ed. with less emphasis of practical and activity based work. These programmes generally intend to develop personal, academic and professional competencies in its scholars. A
comprehensive study of different programmes of education running in some Indian universities* generally highlights following objectives to develop these competencies:

### 6.4.1 Personal Competence

To develop a competent person having qualities of sensitivity, creativity, self-confidence, and innovative leadership following objectives are suggested:

1. To develop ability to appreciate changing needs of society in this scientific age.
2. To get acquainted with educational ideas of great thinkers.
3. To develop ability to understand human behaviour and personality, and capability to apply this knowledge and understanding to guide the learners to learn efficiently and effectively.
4. To develop social sensitivity, tolerance and broad mindedness, respect of truth and objectivity and appreciation of human welfare and values.
5. To develop proper attitude towards conservation of environment.

### 6.4.2 Academic competence

To inculcate desirable knowledge, skill and attitude to pursue study and practice of education following objectives should be fulfilled:

1. To develop concept and understanding of education as a subject of study.
2. To get acquainted with knowledge of essential facts, understanding of essential principles, concepts, trends and generalizations of the discipline of education.
3. To develop specialized knowledge and understanding about the philosophical, psychological and sociological bases of education and about the other specialized areas of education.
4. To study the historical development of education.
5. To develop national and international perspective about educational theory and practice to enable the learners to visualize the inter-linkages and dependency among different educational systems.
6.4.3 Professional competence

To develop professional competencies in teaching, research and publication following objectives are suggested:

1. To develop positive attitude towards teaching as a profession.
2. To develop an understanding of the objectives of school education.
3. To inculcate appropriate professional behaviour along with knowledge of existing system of education and education policy.
4. To develop a working knowledge of ICTs and their application in formal and non-formal systems of education and for teacher empowerment.
5. To develop knowledge, understanding and skills of management, administration, planning and financing of educational institutions.
6. To develop adequate understanding of educational research methodology and of the thrust areas in which educational research should be undertaken.

These objectives are not the objectives of any other discipline. Only the discipline of education has the required knowledge, efficiency and attitude to fulfill these objectives. In addition to these very own objectives there are many other characteristics of education on the basis of which status of a distinct and unique academic discipline can be provided to the ‘study of education’.

6.5.0 Analysis of education as a discipline on criteria of a discipline

A new academic discipline should address issues of ongoing concern that are not adequately addressed by existing disciplines. In spite of sharing content and methods with other disciplines, it should have its own well-defined objectives, content and methods. In the previous chapters, meaning and different criteria of a discipline were discussed. It was found that the meaning of the term discipline is not very clear. The most commonly accepted meaning of the term is a body of knowledge. Bodies of knowledge may be of various kinds, such as theoretical or practical, pure or mixed, old or new, applied and professional. However, it is not very clear that which kind of knowledge bodies are disciplines and which are not. With all these doubts associated
with the concepts and characteristics of a discipline, disciplinary status of education will be analyzed on the criteria as deduced in the last chapter.

6.5.1 Criterion-1

‘A discipline has a recognizable and significant tradition or an identifiable history.’

6.5.1.1 Discipline of Education: Historical Perspective

Each discipline has its own evolutionary history on the basis of which origin and development of a discipline can be traced. Any discipline originates when human beings face new problems so complex and specialised in nature that their accumulated experiences and any existing body of knowledge become limited to solve these problems. In such a situation, they need a different kind of wisdom and thinking, strategies and methods generally not possessed by any existing body of knowledge. During the search of these specialities sometimes, an entirely different and new body of knowledge emerged or sometimes existing bodies of knowledge contribute some of their characteristics to form a new body of knowledge. In any case, the emerging body of knowledge to a large extent depends on some pre-existing bodies of knowledge but slowly develops as a unique and distinct field of knowledge. Evolutionary history of any discipline describes the need and urgency of emergence of a discipline. It also points out the landmarks which shape the discipline in its present form.

When we trace the evolutionary history of education, we find that its origin is as old as the evolution of human beings. Since their evolution, needs and curiosity of human beings inspired them to explore their surroundings. This exploration resulted in accumulation of vast amount of knowledge about the various processes of environment. When human beings invented strategies to transfer this accumulated knowledge to their progenies, since then the inception of ‘study of education’ took place. Human beings searched the methods of production, preservation and transfer of knowledge. They devised the methods and techniques for other members of their community to get acquainted with this knowledge. In the other words, they explored the ways of educating other human beings. However, the disciplined, systematic and institutional study of education started late. In the past educational studies was seen as
a part of education/training of teachers. Teacher education is a program that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirements of the profession and face the challenges therein. The history of Teacher education is as old as the evolution of socialization in early human beings. Since the beginning of human existence, each generation has passed on cultural and social values, traditions, morality, religion and skills to the next generation. In pre-literate societies, education was given orally and the people learn informally through observation and imitation from their family and society. Some forms of traditional knowledge were expressed through stories, legends, folklore, rituals, and songs, without the need for a writing system. Settlement, agriculture and metalwork brought new knowledge and skills to be learned and taught by each generation. As communities grew larger, and the customs and knowledge of ancient civilizations became more complex, there was more opportunity for some members to specialize in one skill or activity or another, becoming priests, artisans, traders, builders or labourers. Many skills would have been learned from an experienced person on the job, in animal husbandry, agriculture, fishing, preparation and preservation of food, construction, stone work, metal work, boat building, making of weapons, military skills and many other occupations.

With the development of writing, it became possible for stories, poetry, knowledge, beliefs, and customs to be recorded and passed on more accurately to the future generations. Literacy in preindustrial societies was associated with civil administration, law, long distance trade or commerce, and religion. A formal schooling in literacy was often only available to a small part of the population, either at religious institutions or for the wealthy who could afford to pay for their tutors. Nowadays, formal education consists of systematic instruction, teaching and training by professional teachers. This consists of the application of pedagogy and the development of curricula.

The advent of formal education in an institutional setting required specialized teachers. Since then the concept of teacher education emerged. Earlier, the program of teacher preparation was called teacher training. It prepared teachers as mechanics or technicians. It had narrower goals with its focus being only on skill training. The
perspective of teacher education was therefore very narrow and its scope was limited. Later the term training was replaced by education encompasses teaching skills, sound pedagogical theory and professional skills.

Teaching has been one of the oldest and respected professions in the world. The role, functions, competence and preparation of teachers have undergone a dramatic change from time to time but the need for teachers has been imperative for all times. The changing times as well as the requirements of the society have necessitated changes in the ways of teacher preparation. Initially the preparation of teacher education was more or less practice oriented. At that time, teachers were trained according to the ‘pupil teacher method’. In this method, pupil teachers learned how to teach under the supervision of an experienced teacher (Tibble, 1966). They learned various teaching skills and a body of practical knowledge that derived from a mixture of tradition, maxims, dogma and rules of thumb (Carr, 2006). Later it was felt that a specialized theoretical foundation and continuous research is also necessary in order to prepare better teachers. In this concern, Tibble (1966) quotes R. H. Quick (1884), who expressed his dissatisfaction with this apprenticeship system in the following words,

‘I say boldly that what English Schoolmasters now stand in need of its theory; and further that the universities have special advantages for meeting this need’

Slowly teacher education began to move from training colleges into universities, so courses in educational theory begin to proliferate. Since then education as a field of study was emerged. During its infancy, it was nurtured and supported by other well-established disciplines like philosophy, psychology, sociology and history. These disciplines have a direct involvement in understanding the various processes of human life. Therefore, as a study of the process of educating human beings, education had to take inputs from these disciplines. The massive expansion of colleges of education and the establishment of new universities greatly increased the number of academic staff engaged in theoretical study at this time.

The preparation of teachers for the school system is not the same as the preparation of lawyers, doctors or musicians: the interest of the society in our profession is not the same as its interest in other professions. It is an old saying that the education of
teachers is too important to be left in the hands of educators alone. The words of Foster Watson (quoted in Tibble, 1966)\textsuperscript{13} are also relevant to put here,

‘Truth as founded upon knowledge is like a mountain peak accessible from many sides and he knows the mountain best who has ascended it from many starting points.’

Therefore, education has been developed as a multi-disciplinary study. In addition to four foundational disciplines, it takes inputs from various other fields of study like technology, economics, management, anthropology, and political science etc. The purpose of educational studies is to prepare educators and teacher educators who are well acquainted with teaching skills, sound pedagogical theory and professional skills. Who are adequately aware with the concepts and principles of education and competent enough to conduct research in education.

\textbf{6.5.1.2 Types of institutions involved in academic study of education at different times}

As it was mentioned earlier that academic study of education was originated in institutions of teacher education. From these teachers’ training institutions, education transferred to departments of education in universities, where it took the shape of a disciplined study. The first chairs in education were established in Scotland in 1876. However, it was only from the late 1890s that education departments were founded in English universities. The study of education in Britain can be periodised into four stages, but it is in the last of these, from the 1960s, that the subject really ‘took off, based on a paradigm originally defined by the new philosophers who applied the techniques of linguistic analysis to the subject.\textsuperscript{14} As a result, education has developed as a multi-disciplinary study and is now much more closely related to the mainstream of university studies than it ever was in the past.

Establishment of learned societies and publication of new journals of education strengthened it as a discipline. Teacher Training schools or colleges in different parts of world may be divided into two categories (i) Public and (ii) Private. The Public institutions are financed and controlled by the Government while the Private institutions are run and managed by private organizations. From the point of view of
management and organization, there were following four distinct types of teacher education institutions.\textsuperscript{15}

(1) **Normal Schools**
Normal School movement gained a lot of momentum during the 19th century. These were mainly concerned for the training of elementary school teachers. The duration of the training was about one year. Their curriculum was narrow and limited to the following (i) The review of common school subjects like languages, Geometry, Algebra, Arithmetic, Geography etc. (ii) Mental and moral development of children, and (iii) Principles and methods of Teaching. Presently most of the Normal Schools have been replaced by Teacher colleges.

(2) **Teacher’s Colleges**
During the second quarter of 20th century, some Normal Schools were replaced by Teachers Colleges with more progressive and modern teacher training institutions. These colleges are exclusively devoted to the training of teachers, offering 4 or 5 years integrated courses, both for elementary and secondary school. They function as degree granting institutions. A number of these colleges offer courses for **Master Degree in Education**, while a few of them even offer Ph.D. in teacher education. Some of them also undertake training of specialist teachers and offer courses for colleges and university teachers. The integration of general and professional courses to provide sufficient grounding in the subject matter as well as the art of teaching is the main feature of these colleges.

(3) **Departments of Education**
Departments of Education were created as a part of bigger liberal Arts Colleges and Universities. A **number of Universities opened Departments of Education**. The Iowa University, U.S.A was the first to create a separate department, named, —Department of Pedagogy, for training teachers in the art of teaching. The main function of these departments had been to impart all round comprehensive education for the prospective teachers and provide facilities for further education and research in pedagogy and methodology of teaching. A **Chair of Education was set up in the**
University of Iowa in 1873. University of Michigan created a Chair of Art and Science of Teaching in 1879. By the end of 19th century the number of Colleges and Universities, offering teacher training went up to 24 due to the support of top educationists including John Dewey, Stanley Hall, Thorndike and Charles Judd.

(4) Schools or Colleges of Education
The establishment of university Departments of Education and liberal arts colleges started a new movement of creating autonomous Schools of Education in different universities and colleges of education. The University of Michigan gave a lead by setting up —Chairs of Education. Following the example of Michigan University, many more universities established their own Schools of Education for conducting research in the theory and practice of pedagogy and for the intensive study of the problems of Teacher Education. The Schools and Colleges of Education became popular because of their internal autonomy, independent administration and financial management. They controlled their budget and granted their own degrees to the successful candidates. They developed more intensive programme of teacher education and gave a new dimension to the professional training to the would be teachers. They produced the most relevant literature in the study of education that had been lacking in the nineteenth century.

6.5.1.3 Development of Teacher Education and Education in India

1. In Pre Independence India: ¹⁶

i) Ancient Period
In the Vedic India, the teacher enjoyed a special status and position. The selection and preparation of a teacher was done with much rigour. The teacher must have passed through the recognized curriculum and have fulfilled all the duties of a Brahmachari before he was allowed to become a teacher. The scholarly class of teachers, which later became a caste (Brahmans) became stratified with the passage of time and lost its original grandeur. Later on teachers came from this caste of
Brahmins and it became a hereditary profession. During **Buddhist period**, the place of teacher in the scheme of education was very important. There were two categories of teachers – Acharyas and Upadhayas. The monitorial system was in vogue during the **medieval times** too and was the method of preparing the future teachers. Good and experienced teachers with a discerning eye identified able students and appointed them tutors to look after and teach the junior students in their absence. Although a specialized teacher-training programme did not exist, the teachers had a clear idea of their role and functions and the methods to be pursued in teaching.

**ii) Modern Period**

Before the arrival of the Britishers in India, the European Missionaries first started teacher training institutions. The Danish Missionaries established a normal school for the training of teachers at Serampur near Calcutta. In Madras Dr. Andrew Bell started the experiment of Monitorial System which formed the basis of teacher training programme for the time being. In June 1826, the first normal school was started under the management and with the finances of the British government in Madras. Initially, it prepared teachers for the district schools. Later, this normal school developed into the Presidency College. In 1847, Bombay started a normal school in the Elphinstone Institution and in 1849, Calcutta too had a normal school.

**Wood's Dispatch, 1854**

The Wood's Dispatch, an important educational document was released on 19 July 1854. It urged the establishment of training schools in each presidency in India. The Dispatch suggested the introduction of pupil teacher system (as prevailed in England) in India and an award/stipend to the pupil teachers and a small payment to the masters of the school to which they were attached.

**The Indian Education Commission 1882**

The Indian Education Commission 1882 (The Hunter Commission) recommended that an examination in the principles and practice of teaching be instituted, success in which should hereafter be a condition of permanent employment as a teacher in any Secondary School, Government or Aided. Thus, by the close of the 19th century, pedagogical courses had replaced general education, examinations and certificates in
teacher training had been instituted and practical aspects in planning and teaching were emphasized.

**Government of India Resolution on Education Policy, 1904**

The Resolution enunciated that if Secondary Education was to be improved then the teachers should be trained in the art of teaching. There were five teacher-training colleges in all at places like Madras, Kurseong, Allahabad, Lahore and Jabalpur. It suggested that the training course would comprise knowledge of the principles which underlie the art of teaching and some degree of technical skill in the practice of the art, the course would culminate in a university degree or diploma, and there should be a close link between theory and practice. To implement its suggestions universities instituted **B.T. degree** for graduate teachers.

**Calcutta University Commission, 1917**

This Commission, known as the Sadler Commission, studied all aspects of the University education and presented its voluminous report in 1919. It suggested that the training programme should not only make the trainee a competent class-room teacher but also a good administrator. The commission suggested **opening of postgraduate department of education in Universities**, equips each department with a Professor, a Reader and a number of assistants and institute a post-graduate degree in Education. It recommended the **introduction of Education as an optional subject at the Graduation and P.G. level**. The recommendations of the Sadler Commission had salutary effect on the **institutionalized study of education in India**. Mysore University started a faculty of Education in 1925.

**The Hartog Committee, 1929**

The work initiated by the Sadler Commission was further carried on by the Hartog Committee. The Committee was primarily concerned with primary education but it made far-reaching recommendations for teacher training as well. It suggested that **journals for teacher in the vernacular, refresher courses, conferences and meetings of teacher associations** could do much to brighten the lives of the teachers and improve their work. For the secondary school teachers too, the committee had the same suggestions.
Working on the recommendations of the Sadler Commission, 13 out of 18 universities set-up **faculties of education**. The Lady Irwin College was setup in New Delhi. Andhra University started a new degree the **B.Ed.** in 1932. **Bombay launched a post-graduate degree the M.Ed.** in 1936. Some other important changes in the field of education also took place in the thirties. The Central Advisory Board of Education was revived. Basic Education was started by Mahatma Gandhi in 1937, leading to the training of teachers for basic schools. In 1938, a Basic Training College was set-up at Allahabad and the Vidyamandir Training School was started at Wardha in 1938.

In 1941, there were 612 normal schools out of which 376 were for men and 236 for women. These schools provided one or two years' training. There were 25 training colleges for graduates which were inadequate to meet the needs of the time. In 1941, the Vidya Bhawan teacher's College was started in Rajasthan and the Tilak College of Education in Poona. **Bombay took the lead in starting a doctorate degree in education the same year.**

2. Education in Post-Independence India\textsuperscript{17}

After Independence, the emerging socioeconomic and political situations influenced the national scenario of Teacher Education. The Government of India set-up different Committees and Commissions for addressing to the specific issues of education in general and Teacher Education (TE) in particular. In 1948, the **Central Institute of Education** was established in Delhi and the Government Training College at Allahabad was developed into the **Central Pedagogical Institute**.

**The University Education Commission (1948-49)**

For improvement of teacher training, it suggested that the teacher educators must look at the whole course from a different angle, that the **theory and practice should support each other**; that the intelligent following of rule of thumb methods should be made; trainees be recruited from people having a first-hand experience of school teaching; that courses in the theory of education must be flexible and adaptable to local circumstances; that original work by professors and lecturers in education should not suffer from isolation and lack of inter-university planning.
The Plan Period in Fifties
In 1950, the first conference of Training Colleges in India was held at Baroda and exchange of ideas took place. The conference discussed programmes and functions of the training colleges. In the following year, i.e. 1951, the second All India Conference was held at Mysore. It discussed the teacher training programme in a broader perspective and suggested substituting the term "Education" for "Training" and widened its scope. In the same year, a six-week summer course in education was organized for college teachers at Mysore. The syllabi in teacher education were revised, new areas of specialization added, and practical work improved. There was a spurt of workshops, seminars and conference on teacher education.

The Secondary Education Commission, (1952 -53)
It emphasized that the most important factor in educational reconstruction is the teacher, his personal qualities, his educational qualifications, his professional training and the place he occupies in the school as well as in the community. It recommended training in co-curricular activities, refresher courses and research work for the M.Ed. degree. It recommended three years' teaching experience for M.Ed. Admission, after graduation in education.

Major events in the Sixties
The first National Seminar on the Education of Primary Teachers was held in October 1969. It recommended selection of some training institutions as models for developing primary teacher education on the right lines. It advocated the setting up of State Institutes of Education. During 1962-63, Extension Training Centers in Primary Teacher Education Institutions started functioning. The State Institutes of Education were established by 1964 and a Department of Teacher Education was established at the National Institute of Education. During this period National Council of Educational Research and Training (NCERT) was established in 1961. It was intended to improve school education to training, research, publication and co-ordination. The NCERT established four Regional Colleges of Education, one each at Ajmer, Bhubaneswar, Bhopal and Mysore. A Centre for Advanced Studies in Education was set-up by the UGC in the Faculty of Education and Psychology in the M.S. University of Baroda.
The Kothari Commission, (1964-66)
It recommended that isolation of teachers' colleges with the universities, and schools should be removed. For qualitative improvement, it recommended subject orientation and introduction of integrated courses of general and professional education. It suggested ways to improve the quality of teacher educators. As a result of the suggestions of the Education Commission, 1964-66, some changes were introduced in teacher education. An M.A. degree in Education was introduced in some universities, such as Aligarh, Kurukshetra, Kanpur and some others.

Landmarks during Seventies
In 1973, Government of India set-up the National Council for Teacher Education (NCTE) which was to work as a national advisory body for teacher education. The NCTE drafted a curriculum for preparing teachers for the new 10+2 pattern. The new curriculum was task-oriented. The framework defined the objectives of teacher education in very clear terms, developed the relationship with the community, emphasized and worked out the Socially Useful Productive Work (SUPW), and defined the role and functions of the teacher in the emerging Indian Society. In 1975 through the 42nd Amendment of the Constitution, Education was brought to the Concurrent list.

The Period of Eighties
According to National Policy on Education (NPE) 1986, stress was given to the teacher education programme. Training schools were upgraded to District Institutes of Education and Training (DIETS) and training colleges were upgraded into Colleges of Teacher Education (CTEs) and Institutes of Advanced Studies in Education (IASEs). There were provisions for research and innovation in IASEs. The revised National Policy on Education, 1992 also emphasized the functioning of teacher education institutions. By the year, 1998-99 there were 45 DIETs, 76 CTEs and 34 IASEs.

Major Events during Nineties
During 1990’s the NPE was revised by Acharya Ramamurthy Committee and it gave a humane approach to education emphasizing more on value oriented education. It
also saw the emergence of NCTE as a statutory body of the Govt. of India when NCTE Act of 1993 was passed by parliament. NCTE came into effect on 17th August 1995 for planned and coordinated development of teacher education system across the country.

**Progress in Two Thousands**

The first decade of the twenty first century had the privilege of the liberalization policy introduced in early nineties. The education sector was opened up for private sector participation and there was Public Private Partnership (PPP). After universalization of education and flagship programme of Serva Shiksha Abhiyan, now efforts are made to universalize secondary education through Rashtriya Madhyamik Shiksha Abhiyan (RMSA). To achieve the targets of universalization of primary and secondary education large numbers of qualified trained teachers are needed. As a result, education as a subject of study has become one of the most popular subjects of study at higher education level. Almost all the state, central and private universities and colleges have separate faculties and departments of education. Programmes of studying education and teacher education like B.Ed., M.Ed., and M.A. in Education are in demand. Every year the number of students qualifies National Eligibility Test for lectureship in Education conducted by University Grant Commission is increasing. The number of students opts for research in education is also increasing every year. It shows, today education has become a well-known subject of study.

It is evident from the above discussion that education as a subject of study evolved as a necessity of theoretical foundation for practice of education. The most effective purpose assigned to its study was preparation of effective teacher educators who are well versed not only in practice of education but also in theoretical foundations of education. It was assumed that these teacher educators would effectively control and organize education of future teachers. Therefore, its establishment and development as a subject in higher studies occurred simultaneously with the reformation and development of teacher education at different times. During the passage of time, the scope of studying education was not limited to guiding teacher education only. It widened its scope to other significant branches like woman education, special education, adult education, population education, environmental education and many
more. Due to this expansion, the field of study of education became much broader. Therefore, education not only enriched its subject matter but field of investigation as well. Slowly, teacher education was reduced as a sub discipline of education like its many other sub disciplines. However, still the main functions assigned to educational studies are studying the role of schools and guiding the process of teaching learning in various fields and at different levels.

In spite of being popular as an important field of study at university level the disciplinary status of education still faces doubts and disputes, as we have discussed in earlier chapters. In the remaining part of this chapter, education will be analyzed on different criteria of a discipline to explore its disciplinary identity.

6.5.2 Criterion-2
A Discipline should have a unique mode of thinking or different cognitive framework.

Discipline of Education: mode of thinking or cognitive framework
Tibble (1966), in his popular work ‘An Introduction to the study of Education’\textsuperscript{18} insisted,

“It is clear that ‘education’ is a field subject, not a basic discipline; there is no distinctively ‘educational’ way of thinking; in studying education one is using psychological or historical or sociological or philosophical ways of thinking to throw light on some problem in the field of human learning.”

The argument might be considered relevant during the early phases of evolution of education as a field of study. During its infancy, aims, curriculum, methods and process of education were governed by philosophical thinking. After that with the focus on concepts like ‘child centred education’ and ‘education as a miniature society’, psychological and sociological thinking assisted philosophical thinking for educational planning and processes. There is no doubt that these forms of thinking still play an important role in determining policies and processes of education but somehow education has developed its own mode of thinking during its development
as a field of inquiry. This educational mode of thinking involves a perfect blend of not only four foundational disciplines but also many other disciplines like technology, management and science in addition to its own experiences. Now, education is developed as a multidisciplinary study. It takes inputs from many other disciplines but its cognitive framework is governed by a specific ‘context’, which is strictly educational.

For example, while deciding aims for educational process education takes implications from many philosophies but what should be the aim of education at a particular time is strictly decided by different thinking process of education like critical analysis, reasoning, explanation, description, and decision-making. While describing distinctness of educational thinking Marc Belth defines thinking as ‘not a matter of developing a special capacity, in abstract, and then applying it to the events of nature. It is, rather, the act of contemplating the process of nature, and, with the use of data and of knowledge from a reservoir of memory, shifting the process about, first symbolically and then experimentally, until new forms of the processes begin to appear. With these new forms new outcomes develop.’ He mentions three different modes of thinking or reasoning: mathematical, scientific and philosophical. According to him, educational thinking probably runs closer to the philosophical thinking. However, has a quality of its own. Educational thinking is that kind of thinking whose objective is the improvement of thinking itself. The concern of philosophical thinking is to understand meanings and commitments that are implicit in statements or judgements made. Philosophers have long attended to the epistemological issues raised by the theory and practice of education (along with the moral, metaphysical, social-political, and mind/ language issues so raised). Now, education has developed its own cognitive framework which helps in continuous reflection and action according to changing needs of society. It is what teachers think, what teachers believe, and what teachers do at the level of the classroom that ultimately shapes the kind of learning that young people get.

Educational thinking is characterized by rationality with holistic, nonlinear, and intuitive strategies. Much of what educationists believe about "school" comes from their own experience as students. The academic study of theory and practice of
education and experiences gain during its persuasion refine their cognitive framework about the nature, purpose and process of education. However, through their own school experience, they have formed unconscious beliefs about themselves and their abilities, about the nature of knowledge, and about how knowledge is acquired or "learned." Teachers base their thinking and behaviour on unconscious values - personal, professional, and those of the culture in which they live and were raised. Often, personal values conflict with values of the institution, administrators, and even with a teacher’s own values regarding students. Because teachers' thought processes occur inside their heads, they cannot be measured, quantified, or standardized. They do not yield the data with which traditional researchers are accustomed to working. In this concern, Albert Einstein reminds us, "Not everything that can be counted counts and not everything that counts can be counted." (Quoted in Judy Yero, 2002)

Failure to explore the influence of teacher thinking on the educational process cannot be excused because of its difficulty. Teacher thinking may, in fact, be the most important variable in the educational equation.

No educational theory or principle can compete with a teacher’s wisdom applied in daily classroom situations. Through study and experience as a practitioner of education, this "conventional wisdom" of education passes from generation to generation. Anyone can easily recognize the difference between thinking, decision-making, problem solving, describing, judging, and planning of an educational issue or event by a scholar of education and an outsider. This unique mode of thinking and different cognitive framework about educational issues and factors influencing it provide a distinct identity to discipline of education, not possessed by any other discipline.

6.5.3 Criterion-3

‘Disciplines have a body of accumulated, structured and well organized, specialist knowledge referring to their object of research, which is specific to them and not generally shared with another discipline as a whole’.
Discipline of Education: Body of knowledge

The content of the discipline is defined through that which is recognized as the genuine characteristics of education. The limits of the discipline are marked by divisions between that which is regarded as educational and that which is seen as non-educational. Consequently, the mission of the discipline is not only to produce knowledge about the practices and processes conceived as genuinely educational, but also to mark the margins to and delimit the discipline from that which is seen as non-educational. However, it is also true that almost all the accumulated knowledge in the universe is educational in some sense even that considered as non-educational.

The blame generally education has to face that it does not have a distinct, specialized and well-structured body of knowledge. It borrows most of its content from other disciplines. However, the task of a teacher is so complex and expectations of the society from the education are so high that education has to adopt a far wide range of experiences to educate the educators. As also said by Peter Renshaw,

‘If a student is ‘to realize himself as a person’ he needs to submit himself to a far wide range of experiences than can be provided by the academic study of one main subject.’

It is not possible by would be teachers/teacher educators to gain knowledge of all the fields/subject, therefore, education has a perfect blend of almost all the subjects necessary for the development of a person as a torch bearer to the process of educating. Learning ‘why to teach’, ‘what to teach’ and ‘how to teach’ involves developing a critical skill. This skill is guided by a body of theoretical knowledge, rules and principles, which needs to be acquired through academic study; therefore, subject matter of education is multidisciplinary in nature. Infect discipline of education has crossed the boundaries of a discipline and now most appropriately termed as ‘educational studies’ encompassing a number of studies necessary for fulfilling above mentioned objectives. The main criticism disproves education as a discipline that it draws concepts from other disciplines. However, adopting and utilizing concepts from other disciplines are no barrier to the development of a
discipline. This criticism is not valid because education generates its own meanings to these concepts.

Any programme of the formal study of education generally includes study of following areas: (as mentioned in the curriculum of different programmes of education in different universities)**

- Philosophical and sociological foundations of education
- Educational psychology
- Research methods in education
- Principles and practices of curriculum development
- Measurement, evaluation and testing in education
- Comparative education
- Environmental and population education
- Computer applications in education
- Value education
- Guidance and counselling
- Educational technology
- Management and administration in education
- Teacher education
- Higher education
- Futurology of education
- Pedagogy of a school subject- Mathematics, Science, Social science and Language etc.
- Practical work

All the forms of knowledge available in education that are formally studied and taught can be divided into two parts: Formal knowledge and Practical knowledge. Formal knowledge refers to the knowledge of traditional disciplines, special interest fields and cross-disciplinary programs. Practical knowledge acquired through teaching and other field based activities. Different programmes or the accumulated knowledge available in education can be broadly placed in any one of these categories:
Organization of educational knowledge

Formal knowledge
Knowledge acquired by deliberate and disciplined study of education

Informal or Incidental knowledge
Knowledge acquired through self-experiences while studying or practicing education

- Theoretical Knowledge - Knowledge of concepts, principles and theories of education.
- Practical Knowledge - Knowledge of professional skills and attitude.

Both the theoretical and the practical knowledge together constitute the actual knowledge base of the discipline of education. The practical knowledge that is skills of teaching and organizing classroom activities are mainly the domain of one of its sub disciplines i.e. teacher education.

6.5.3.1 Theoretical knowledge in education

All the theoretical knowledge available in education may be divided in to different fields:

1. foundational disciplines in education
2. special interest fields
3. cross disciplinary programs

All the theories, concepts, terms, principles, facts, laws and methods of research are derived, shared, adapted from or developed in these areas. While foundational disciplines provides strong theoretical bases to education, special interest fields and cross disciplinary programs aim to cater needs of diverse groups of learners. Special interest fields are essentially the areas having their origin in the discipline of education. Cross-disciplinary programs are mutual collaborations between education and related disciplines. In addition to these areas, methodology of teaching different subjects and various methods of research in education are also essential fields of study.
of education. The total knowledge available in education either developed internally or borrowed from other disciplines, when perceived as a whole appear as a unique, specialized and well organized body of knowledge distinct from other disciplines. A detailed discussion of these different areas is given below:

6.5.3.1.1 Foundations of Education

This area includes philosophical and sociological foundations of education, educational psychology and history of education. Study of these areas helps in understanding of educational processes from philosophical, sociological, psychological and historical points of view. These points of view serve as theoretical bases to grasp the nature of educational processes. Concepts from all these areas when used in education become essentially educational in nature. For e.g. a psychologist may be interested in studying human learning in general, however learning of the child in classroom conditions is the field of interest of an educationist. Here, the scope of studying learning is more focused and narrower than the psychology.

1. Philosophical foundations of Education

Human life cannot properly be understood without philosophy. Life and education are inseparably connected. One cannot be separated from the other. Hence, life has a philosophical base and so education also has a philosophical base. Philosophy furnishes the goals of life and education gives the means to achieve those goals. Man is the common subject of both philosophy and education. Philosophy and education are interrelated, interdependent, identical and inseparable from each other. Every philosopher has an educational outlook and every educator has a philosophy of life. The truths and principle established by philosophy are applied in the conduct of education process.

Philosophy exercises tremendous influence on education in all its aspects—aims, curriculum, methods, teachers, textbooks, administration, discipline, evaluation etc. There is no aspect of education, which is not influenced and determined by philosophy. Thus, we find that philosophy affects both the theoretical and practical aspects of education. One cannot be separated from the other.
2. Sociological Foundations of Education

Education takes place in society constituted of individuals. It is a social process. It has a social function as well as social relevance. A school is created by the society and the society is shaped and molded by the school. Thus, education is both a cause and product of society. It originates in the society and it must fulfill the needs and aspirations of the society. There is thus an intimate relationship between education and society. Education helps to solve the multifarious social problems. Education is not a static phenomenon but a dynamic and ever-changing process. Every society with its own changing socio-cultural needs will require education to meet those needs. Since needs change continuously therefore education must also change. The needs of different societies differ; therefore, education should be dynamic. Educational sociology analyses and evaluates the groups and institutions in which learning takes place and the social process involved in learning and teaching. It analyses and evaluates the social trends and ideologies, which affect education. It helps us to understand that education is a means of social change. It throws light on human interaction and relationships within the school and the community. It emphasizes that learning is a social process. It is the total cultural milieu in which and through which the learning experience is acquired and organized. Educational sociology plays a vital role on the modern educational theories and practices. It influences the aims of education, the principles of curriculum construction, the methods of teaching, the school organization and administration.

3. Psychological Foundations of Education

Psychology has greatly influenced the development of modern education. Basic connections and relationships between psychology and education are manifold. Educational theory and practice are conditioned by the nature of human behaviour. Educational Psychology has developed to study scientifically the behaviour of the students and to help the process of education. Educational psychology discusses process of development of the students, process of learning, social adjustment of the students, Individuals differences in physical abilities and mental traits and powers, Interest and motivation of child and various problems associated with the mental health of the students. The function of educational psychology is to know the child
and his educational process completely. It tries to determine the means of attaining the educational goals and objectives outlined by educational philosophy. It helps the teacher, the students as well as the parents. The primary aim of education is the total development of the child. Modern education is child-centric, that is why psychology studies the nature and behaviour of the child in different developmental stages. Child centered education is the direct effect of psychology on education. All the principles of modern school organization and administration have directly been influenced by psychology. For example, timetable is framed on the basis of fatigue index of the students. The modern concept of school discipline is also a psychological product. Psychology emphasizes the importance of freedom of the child in the maintenance of discipline in the school.

4. History of Education

The history of education helps in knowing the early educational thoughts and in solving different educational problems. The main task of history of education is to trace the development of education to try to evaluate the functions it has fulfilled at different stages of social development and so to reach a deeper understanding of the function it fulfills today. Under this branch, educational organizations of pre-historic, ancient and modern periods and relation of culture and education, pioneers of education and educational thoughts of various educationists are studied. The history of education may suggest causal explanations for changes that punctuate the political and social timelines of educational development. It helps us to understand the evolution of the educational system and structures to date. There are key dates and events within the development of the education system that reflect the significant political and social issues of the time. While the scope of education has changed radically since the late nineteenth century, the pastoral, disciplinary and knowledge distribution functions of schools and other education establishments remain significant in modern western societies.

6.5.3.1.2 Special interest fields

This category includes programs that have developed significant scholarly literature and draw on the disciplinary programs but focus on area of educational practice or a particular student grouping. These areas include policy studies, teacher education,
curriculum, educational administration, higher education, special education, woman education, environmental education, educational technology and early childhood education. These areas of knowledge are applied or technical in nature.

1. Teacher Education

Teacher education encompasses teaching skills, sound pedagogical theory and professional skills. Teacher education is based on the theory that -Teachers are made, not born in contrary to the assumption, -Teachers are born, not made. Teacher education prepares teachers for all levels of education, namely Pre-primary, Primary, Elementary, Secondary, Higher Secondary and the Tertiary. Teacher education also educates teachers of special education and physical education. The needs and requirements of students and education vary at each level. Hence, level and stage-specific teacher preparation is essential.

2. Curriculum Development

Curriculum development includes a variety of activities around the creation of planned curriculum, pedagogy, instruction, and delivery methods for guiding student learning. Curriculum development is defined as the process of selecting, organizing, executing and evaluating the learning experiences on the basis of need, ability and interest of the learner and on the basis of nature of society or community.

3. Educational Administration

In this branch, establishment of schools, their management, supervision and control, their inspection system, appointment of employees, their salary and allowances, their working conditions etc. are studied. Educational Administration examines the administrative theory and practice of education in general and educational institutions and educators in particular. The field ideally distinguishes itself from administration and management through its adherence to guiding principles of educational philosophy.
4. Comparative Education

The comparative study of education system of other country enables us to know the
differences exist in various systems, equalities and inequalities and the reason thereof
and the impact each is making on the other. Comparative education examines
education in one country (or group of countries) by using data and insights drawn
from the practices and situation in another country, or countries.

In comparative education, analysts are interested in the systems that individual nations
use to educate their citizens. The analysts examine the strengths and weaknesses of
the different systems and might compare and contrast those in two or more nations.
Another area of interest is in creating comparisons within a single nation over time,
looking at how changes in the system have influenced educational outcomes, as well
as examining variations in the systems from region to region.

5. Educational Technology

Educational technology can be regarded, as the application of systematic knowledge
about learning and instruction to teaching and training with the aim of improving their
quality and efficiency. For this reason, a wide range of presentation, control and
feedback devices may be employed such as teaching machines, stimulators and
computers. Educational technology is thus the application of scientific knowledge
about learning and conditions of learning to improve the effectiveness of teaching and
learning.

As a field, educational technology emphasizes communication skills and approaches
to teaching and learning through the judicious use and integration of diverse media.
Scholars in the field examine the uses of innovative media and technologies for
education, examining all aspects from direct student learning to management and
impacts on institutions. As in all forms of applied technology, the field studies how
theoretical knowledge and scientific principles can be applied to problems that arise in
a social context. Practitioners in educational technology seek new and effective ways
of organizing the teaching and learning process through the best possible application
of technological developments. These activities rely upon a body of knowledge for
successful and ethical implementation, rather than routine tasks or isolated technical
skills. It encompasses Hardware approach like use of machines and materials, Software approach like use of methodologies and strategies of teaching learning and Systems approach that uses the management technology that deals with the systematic organization of the hardware and the software.

6. Special Education

Special education or special needs education is the education of students with special needs in a way that addresses the students’ individual differences and needs. Ideally, this process involves the individually planned and systematically monitored arrangement of teaching procedures, adapted equipment and materials, accessible settings, and other interventions designed to help learners with special needs achieve a higher level of personal self-sufficiency and success in school and community than would be available if the student were only given access to a typical classroom education. Common special needs include challenges with learning, communication challenges, emotional and behavioral disorders, physical disabilities, and developmental disorders. Students with these kinds of special needs are likely to benefit from additional educational services such as different approaches to teaching, use of technology, a specifically adapted teaching area, or resource room.

7. Environmental Education

The main objective of the study of Environmental education is to enable the student teacher understand about the concept of environmental education. It also develops in the student teacher a sense of awareness about the environmental pollution, and possible hazards and its causes and remedies. It creates a sense of responsibility towards conservation of environment, bio-diversity and sustainable development. It develops reasonable understanding about the role of school and education in fostering the idea of learning to live in harmony with nature. Its study enables the students to understand about the various measures available to conserve the environment for sustaining the development.

8. Educational measurement and evaluation

The purpose of the study of this branch is to acquaint the student teacher with the basic scientific concepts and practices in educational and mental measurement. It
enables the student to tabulate and find out some standard meaning from the raw scores by using statistical procedures. It develops skills and competencies in the student teacher for the use of the techniques in the field. It helps the student teacher to interpret the result of educational measurement and enables them understand about various educational and mental measurement tools.

9. Distance Education

There is no one meaning of the term distance education. It is known by a variety of names, viz. Correspondence Education, Off-campus Study, Open Learning, Open education, etc. Distance education is characterized by a non-conformist and non-traditional approach that, in effect, questions existing norms of traditional education and seeks to provide a new orientation to educational process.

10. Adult Education

Adult learning, or adult education, is the practice of training and developing skills in adults. It takes on many forms, ranging from formal class-based learning to self-directed learning and e-learning. Adult Education aims at extending educational options to those adults, who have lost the opportunity and have crossed the age of formal education, but now feel a need for learning of any type, including, basic education (literacy), skill development (Vocational Education) and equivalency.

11. Educational Problems and policies

Education policies are the principles as well as the collection of laws and rules that govern the operation of education systems. This area seeks to answer questions about the purpose of education, the objectives (societal and personal) that it is designed to attain, the methods for attaining them and the tools for measuring their success or failure. This area also discusses problems of process and components of education. Research intended to inform education policy is carried out in a wide variety of institutions and in many academic disciplines. Education occurs in many forms for many purposes through many institutions. Examples include early childhood education, kindergarten to 12th grade, two and four year colleges or universities, graduate and professional education, adult education and job training. These all stages
suffer from many problems, which hinder the proper functioning of the education at these stages. Therefore, education policy can directly affect the education people engage in at all ages. Examples of areas, subject to debate in education policy, specifically from the field of schools, include school size, class size, school choice, school privatization, teacher education and certification, teacher pay, teaching methods, curricular content, school infrastructure investment, and the values that schools are expected to uphold and model.

12. Early childhood education
It refers to the formal teaching of young children by people outside the family or in settings outside the home. "Early childhood" is usually defined as before the age of normal schooling – five years in most nations. Early childhood education focuses on children's learning through play, art, and social games. Early childhood education (ECE) programs include any type of educational program that serves children in the preschool years and is designed to improve later school performance.

13. Education Futurology
This area is universally conceptualized as the system of predicting future outcomes and demands/requirements in education through interplay of appropriate technology, relevant data on socio-economic and cultural variables, the practice itself demands a clear anticipation of future requirements that must be predicted now, for actualization in the future. This task demands a lot of foresight, foreknowledge, updatedness and a great level of pre-vision on the part of the educational planner.

14. Value Education
This term is used to name several things, and there is much academic controversy surrounding it. Some regard it as all aspects of the process by which teachers (and other adults) transmit values to pupils. Others see it as a subject area of education intended to impart moral or ethical knowledge. Values education can take place at home, as well as in schools, colleges, universities, offender's institutions and voluntary youth organizations. There are two main approaches to values education, some see it as inculcating or transmitting a set of values, which often come from
societal or religious rules or cultural ethics while others see it as a type of Socratic dialogue where people are gradually brought to their own realization of what is good behaviour for themselves and their community.\textsuperscript{28}

\textbf{6.5.3.1.3 Cross-disciplinary programs}\textsuperscript{29}

These programs include social, cultural, comparative and critical studies in education. With the time these field become well-established field of study and called special interest fields or finally, traditional disciplines.

\textbf{1. Guidance and Counseling}

The aim of education is to achieve the fullest possible realization of possibilities inherent in the individual. Education fosters all aspects of an individual’s personality. Guidance is an integral part of education and helps in achieving the goals of education. Guidance is quite essential for the development of individual which is the main objective of education. The Education Commission (1964-66) observes\textsuperscript{30} “Guidance should be regarded as an integral part of education and not as a special, psychological or social service which is peripheral to educational purposes. It is meant for all students not just for those who deviate from the norm in one direction or the other.” A. J. Jone (1951)\textsuperscript{31} points out the relationship between guidance and education, “All guidance is education but some aspects of education are not guidance. Their objectives are the same the development of the individual but methods used in education are by no means the same as those used in guidance.”

\textbf{2. Economics of Education}

Economics of education is the study of economic issues relating to education, including the demand for education and the financing and provision of education. From early works on the relationship between schooling and labor market outcomes for individuals, the field of the economics of education has grown rapidly to cover virtually all areas with linkages to education.

\textbf{3. ICT in Education}

ICT (Information and Communication Technology) in education is any hardware and software technology that contribute in the educational information processing. In the
context of present era, ICT mainly comprises of Computer technology with its hardware, like, Personal computer machine, infrastructure required for setting up Internet facility and also software like, CD ROM including various programme packages, E-learning strategies etc. ICT in education is any Information Technology that focuses on the acquisition, storage, manipulation, management, transmission or reception of data required for the educational purpose. Uses of Electronic learning technology like, teleconferencing, power point presentations, CD ROM are Communication Technologies, which are the part of ICT. Different software packages for the use in different department of education like library software, administration software, software related to managing the entire teaching learning process are also examples of use of ICT in education.

There may be difference in opinions regarding classifying different areas under special interest fields and cross-disciplinary programs. For example, environmental education may be placed in both the categories. Therefore, the above categorization of different areas of study of education should be considered as a convenient arrangement and not an ultimate classification.

6.5.3.2 Practical knowledge in education

Education is a unique discipline in the sense as it combines both the theory and the practice. Practical knowledge is gained through formal or informal or incidental experiences. Teaching, researching, networking with educationists, managing different activities are some of the methods to gain practical knowledge of education. Some of these activities are deliberately planned for the learner in the academic study of education such as practice teaching, action research and other practical work, while some are learned by self-experience. Practical knowledge is helpful in many of the activities such as teaching, research, administration, evaluation and maintaining discipline. Methodology of teaching is an important area includes mathematics education, science education, language education, and history education etc. This is an important aspect of curriculum of teacher education. The objective of study of this area is to make pupil teachers efficient in understanding objectives, principles and methods of teaching different school subjects. This study makes them able to:
1. Understand general and instructional objectives of teaching.

2. Understand the importance and place of teaching subjects in schools.

3. Know various approaches and methods of teaching.

4. Prepare lesson plans properly.

5. Select and organize learning experiences according to content and level of students.

6. Develop and use various teaching aids.

7. Evaluate the content of textbooks.

8. Develop the skills of diagnostic and remedial teaching.

6.5.3.3 Distinctness of body of knowledge of education from other disciplines

It can be interpreted from the above discussion that philosophy, psychology and sociology have a great influence on content of education. In the words of G. Ferree, “One cannot imagine a body of knowledge about education that is unique and autonomous in the sense that it contains no statements whatever that could be considered as appropriate to psychology, sociology, anthropology, political science, or any of various other bodies of knowledge.” He stressed that bodies of knowledge are not discriminable by the different classes of things, which they discuss, but by the different sorts of questions, which they are concerned to answer. For e.g., The major concern of psychology, sociology, and anthropology is to discuss human beings but, the questions which these bodies of knowledge intend to discuss about human beings are different. These different questions differentiate different bodies of knowledge from each other. Similarly, education also discusses those questions about human beings, generally not discussed by its foundational disciplines.

In spite of the great influence of the foundational disciplines, the claim that most of the concepts and principles in education are derived from its foundational disciplines mainly from philosophy, psychology and sociology is not completely true. When subject matter of education is critically analyzed it is found that most of the content
which seemingly adopted from other discipline is uniquely educational own content. Following points present the clear picture:

1. All of the main foundational disciplines of education in some or other way revolve around the common object that is ‘man’. The main concern of the theories, principles and concepts of these disciplines is making human life better spiritually, individually and socially.

2. While philosophy prescribes the aim for life, Sociology and psychology transform these aims into achievable social and individual forms. Thereby, ensuring the attainment of the aim of life and wellbeing of both the individual and the society.

3. For complete wellbeing of an individual two factors are responsible:
   i. The individual himself
   ii. Society in which he lives

   Philosophy tells us what is desirable for wellbeing of an individual and his society and how an individual can live a meaningful life. The two offshoots of philosophy that is psychology and sociology assist the philosophy in this concern. While psychology explores the individual’s desires and interests, sociology determines the extent to which these desires can be fulfilled as a member of society. In this way, psychology and sociology while assisting to implement philosophical prescriptions maintain a balance between individual aspirations and societal expectations from him.

4. Therefore, any discipline or area of study, whose object of interest is human beings in some or other way, cannot remain untouched from the influence of philosophy, psychology and sociology. Almost all the social sciences utilize principles of one or all of these disciplines.

5. Education as a social science is directly related to human beings. Only humans are the living beings who can be educated, not the animals or plants. The purpose of educating the human beings is to make their life better spiritually, individually and socially.

6. Therefore, it is mandatory for education to follow principles, theories and concepts of philosophy, psychology and sociology. However, whenever education utilizes principles, concepts and theories of these disciplines it strictly
converts them into educational meaning. Thereby, transforming them into
distinctively intellectual content of education entirely different from their original
disciplines.

7. In comparison to these disciplines, scope of education is more focused and
narrower than its foundational disciplines. While foundational disciplines study
particular aspects of human beings in general, scope of education is limited to
studying process of educating human beings in institutional or social settings.

8. In spite of heavy influence of these disciplines on educational content and
methods, none of these nor a combination of these can replace education as an
alternative. Different disciplinary influences are so uniquely interwoven and
structured in the discipline of education as not possessed by any other discipline
in the academic world. Thereby giving its content a distinct identity.

9. To give recommendations for theory and practice of education is not the Primary
purpose of philosophy, psychology and sociology. Education of human beings is
the primary purpose of discipline of education only. Therefore, education extracts
the implications (and not the concepts and theories as such) for its theory and
practice from different theories of these disciplines resulting in its own body of
knowledge.

10. To draw out meaningful implications from a variety of disciplines and restructure
and interwove them into educational framework is not an easy task. This
cumbersome task is possible only in the discipline of education. The subject
matter of education is so unique that its scholars have a unique vision and
knowledge about almost all the aspects necessary to make an individual a
complete human being.

11. Despite drawing out from its foundational disciplines, education also has some
special interest fields, which are essentially of educational origin. These programs
are also known as sub disciplines of education. Special education, distance
education, woman education, environmental education, school administration and
management are some of the examples of such programs. This programs guide
practicing of education in a particular area of interest.

12. Besides special interest fields, education has some cross-disciplinary programs
like economics of education and ICT in education. In this programs education has
crossed the disciplinary boundaries and shake hands with other disciplines on common matter of interest.

13. Unfortunately, content of education is unnecessarily overburdened with foundational disciplines; while educational own content (i.e., special interest fields and cross-disciplinary studies) is less emphasized. In recent years, these sub disciplines of education have become so specialized that they are claiming to be recognized as independent disciplines in their own right.

Above mentioned points make it clear that content of discipline of education, whether borrowed, shared or adopted has its own uniqueness and structure when seen as a whole or as a unit, which is distinct from the subject matter of other disciplines. Therefore, there should not be any hesitation in accepting that education as a discipline has a body of accumulated, structured and well organized, specialist knowledge not possessed by any other area of study in the academic world.

6.5.4 Criterion-4

‘Disciplines have theories and concepts that can organize the accumulated specialist knowledge effectively.’

6.5.4.1 Theories in education

An educational theory can be defined as an organised body of principles and recommendations directed towards those concerned with educational practice. Role of educational theory is different from that of scientific theory, and the standard for judging scientific theories is not in all respects appropriate for judging the validity of educational theories. It is generally believed that being a practical enterprise educational theory is unnecessary. It is also said that education depends on theoretical foundations of other discipline and does not have or cannot develop its own theories. Several arguments are given to exempt education for having any theory or to develop its own theories.

- Arguments do not support need of theories for education

1. Education is generally understood to exclude ‘indoctrination’ or ‘conditioning’. It respects the personal commitment to understanding and
making sense of experience, recognizing that such a commitment will shape people in different ways—certainly not producing the standardized outcomes loved by some researchers. If we follow a certain theory in education, it would not be possible to respect individual differences.

2. In the past, philosophical theories generally prescribed aims for education. These aims were formulated both in terms of certain types of individuals to be produced by education and of certain types of society to be realised. The realisation of an educational aim would involve producing a person equipped to live in a certain style, to respond in a distinctive way to the world about him, and this has generally been understood as requiring the initiation of the pupil into certain kinds of knowledge and skill. However, each child is born with innate potentials and should not be expected to show a predetermined behaviour pattern.

3. Human behaviour especially behaviour of a child generally cannot be explained by any theory. In a classroom, sometimes the conditions become so strange that a teacher has to use his own experience and wisdom to solve the problem. No teacher can control the classroom and children activities on the basis of certain theories.

- **Arguments support need of theories for education**

On the other hand, there are also some arguments, which suggest that education should develop its own theories. For example, According to Marc Belth,

> “every institution which exists is grounded in some idea or system of ideas. From that idea, the institution derives not only the reasons for its existence but the determinants through which it sees the meanings and values of the events of experience. A study of institution calls first for an enquiry into theory.”

The term ‘educational theory’ is generally used to refer theories of philosophy, sociology and psychology, which have a bearing of educational practice. However, efforts are also being done to develop own theories of education. Therefore, educational theories may be categorised into two: theories for education and theories of education.
6.5.4.1.1 Theories for/about Education

These are theories of foundational discipline applicable in education, broadly derived from three main foundational disciplines:

i. Philosophical theories
ii. Sociological theories
iii. Psychological theories

i. Philosophical theories

Philosophical theories are the earliest theories of education. The great thinkers like Plato, Locke, Rousseau, Mill and Dewey have given prescriptions for guiding process of educating. Their recommendations are generally termed as ‘Theories of education’.

In the words of T. Moore35, “We may say that the theories offered by these writers are ‘general’ theories of education, theories which try to give comprehensive, over-arching guidance in the conduct of education and which are usually associated with a distinctive social and political position.”

Normative philosophies of education make use of the results of philosophical thought, factual inquiries about human beings, the psychology of learning, what education 'should be', what dispositions it should cultivate, why it ought to cultivate them, how and in whom it should do so, and what forms it should take. A full-fledged theory of education based on the philosophical normative includes: 1. Basic normative premises about what is good or right; 2. Basic factual premises about humanity and the world; 3. Conclusions, based on these two kinds of premises, about the dispositions education should foster; 4. Further factual premises about such things as the psychology of learning and methods of teaching; and 5. Further conclusions about such things as the methods that education should use.

At the metaphysical level, there are four broad philosophical schools of thought that apply to education today. They are idealism, realism, pragmatism (sometimes called experientialism), and existentialism. Two of these general or world philosophies, idealism and realism, are derived from the ancient Greek philosophers, Plato and Aristotle. Two are more contemporary, pragmatism and existentialism.
Within the epistemological frame that focuses on the nature of knowledge and how we come to know, there are four major educational philosophies, each related to one or more of the general or world philosophies just discussed. These educational philosophical approaches are currently used in classrooms the world over. They are **Perennialism, Essentialism, Progressivism, and Reconstructionism**. These educational philosophies focus heavily on what we should teach, the curriculum aspect.\(^{36}\)

**ii. Sociological theories\(^{37}\)**

There are three main theories of sociology intended for education. **The Functionalist Theory** focuses on the ways that universal education serves the needs of society. Functionalisst first see education in its manifest role: conveying basic knowledge and skills to the next generation. Functionalisst point to other latent roles of education such as transmission of core values and social control. **The Conflict Theory** sees the purpose of education as maintaining social inequality and preserving the power of those who dominate society. Conflict theorists examine the same functions of education as functionalisst. Functionalisst see education as a beneficial contribution to an ordered society; however, conflict theorists see the educational system as perpetuating the status quo by dulling the lower classes into being obedient workers. **The Symbolic Interactionist Theory** limit their analysis of education to what they directly observe happening in the classroom. They focus on how teacher expectations influence student performance, perceptions, and attitudes.

**iii. Psychological Theories\(^{38}\)**

Psychological theories are basically theories of learning and motivation. They play a significant role in guiding teachers during teaching-learning process. Some of the major psychological theories are **Constructivism, Behaviourism, Theory of Cognitive Development, The Brain-based Learning Theory, The Control Theory of Motivation, The Social Learning or Observational Learning Theory, and The Social Cognition Learning Model**. All these theories have wide application for curriculum planning, methods of learning, instruction and assessment, reward or punish students. Psychological theories promote child-centered education and
emphasize that in order to teach well, we must understand the mental models that students use to perceive the world and the assumptions they make to support those models. These theories also suggest that educators must plan a developmentally appropriate curriculum that enhances their students' logical and conceptual growth. According to these theories traditional schooling, often inhibits learning by discouraging, ignoring, or punishing the brain’s natural learning processes. Therefore, Teachers must design learning around student interests and make learning contextual. Teachers should structure learning around real problems, encouraging students to learn in settings outside the classroom and the school building.

6.5.4.1.2 Criticism of earlier theories about education

Generally, earlier theories about education are criticised on following points:

1. Each of these theories made certain assumptions, about aims, about human nature and about knowledge and methods. The theories have considerable point and value. However, these assumptions depended on social and political climate of their time.

2. Each theory declared aim of education according to the need and ideology of that particular time. For e.g. Plato’s educational aim, then was the production of wise and good rulers whose wisdom and goodness derived from this special grasp of reality, which Plato calls knowledge, as opposed to opinion. Similarly, Dewey, Rousseau, and Mill’s assumptions of educational aims were entirely different.

However, all of these are products of their time and limited by the knowledge then available. These are based on assumptions not always defensible and often different from those we would make today. These assumptions may always be questioned by appeals to criteria of a scientific, moral, or philosophical kind. In one sense, they may be said to be out of date or not guiding adequately for current practice. However, each of them give useful insights into what goes on in schools and into what ought to be going on there. However, it is also true that Seventeenth and eighteenth centuries are different from that of nineteenth and twentieth. Earlier we did not know much about psychological and sociological concepts related to education. This reduces their
applicability to present day situations, and this would be true of the content of any such theory of education.

6.5.4.1.3 Need of constructing own theories of education

As discussed above, the term educational theory is generally used to cover writing of different kinds on education. Various philosophical, sociological and psychological interpretations of educational issues are included as theories of education. Generally, these interpretations are influenced by political or social background of a particular time or place. Sometimes explanations given by these theories do not prove helpful in actual classroom conditions. These theories now need to be supplemented by insights gained from new accessions of knowledge and different educational perspectives. Therefore, there is an urgent need to construct own theories of education. However, we cannot hope to construct a detailed general theory of education, which will hold good in all times and in all circumstances. The specific content, assumptions, and recommendations of a general theory of education must always be regarded as liable to change but what we called its structure is not.

6.5.4.1.4 Assumptions for developing theory of education

T. W. Moore in his book ‘Educational Theory – An Introduction’\(^{39}\) describes some assumptions for developing a general theory of education. On the basis of his description assumptions for a general theory of education can be suggested as:

1. Educational Aims

Any general theory of education should guide in achieving aims of education. However, which kind of educational aims are considered for developing a general theory of education may be a matter of debate due to three reasons i. There is not a single aim of education. ii. Aims are continuously revising. iii. Aims are influenced by needs of individual, society, culture and time. Therefore, uniform aims cannot be formulated for all the individuals, social and cultural setups. In general, aim of education should be improvement in knowledge, skills, attitudes and values.
2. The nature of children
The second fundamental assumption about those being taught. However, human nature in general cannot be said as plastic. But, to some extent it can be assumed that children are plastic. Children do not only change as a result of what happens to them, but they change and develop in certain orderly and predictable ways. However, in spite of their plastic nature, due to individual differences uniform norms cannot be suggested for all. Therefore, any theory of education must consider individual differences.

3. Knowledge and Methods
Assumptions about particular areas of knowledge to be learned, skills to be acquired, and attitude to be adopted would form part of the particular content of the theory, and would need to be justified in terms of the end they are required to serve. It will be the individual circumstances of the school, class, child and teacher, which will determine what methods and what organizations, may be used most effectively. In the words of Moore, “All that require to be done here is to point out that the methods recommended must, in addition to being morally acceptable and allowing pupil participation, be pedagogically effective, and the assumptions that they are so would be a component in a general theory of education.”

In general, theory of education should give broad recommendations about aims, nature of the learner, methods and procedures, leaving it to the individual teacher to adapt and apply these recommendations in practice.

6.5.4.1.5 Framework for a general theory of education
Based on the above assumptions following framework may be suggested to develop a general theory of education:

1. A general theory of education should aim to achieve educated men, then, on the basis of what we currently know about children and their development, we should initiate them into what we can justify as worthwhile knowledge, skill and attitudes, using such methods as satisfy the canons of morality, pupil-participation and effectiveness.
2. What must be done, for practical purposes, is to fill in this formula with such specific assumptions of substance as will meet on-going educational situation.

3. The practicing teachers may within this general framework, give content to their own theory of education.

4. It provides an overall approach to the enterprise of education. It would also be particular in that it would depend for its specific content on present day knowledge and assessments.

5. A general theory of education should be flexible. Any conclusion is open to challenge and modification. It should give broad recommendations about methods and procedures, leaving it to the individual teacher to adapt and apply in practice. It should tell pupil teachers how to deal with specific crises in the classroom.

In the field of theoretical foundations, discipline of education is still dependent on theories of other disciplines. However, efforts have been started to develop own theories of education, which are guided by actual teaching learning situations and not by some abstract ideas. Recently, some contemporary theories of education have emerged like theories of curriculum aim to "describe, or set norms, for conditions surrounding many of the concepts and constructs" that define curriculum. Descriptive theories of education provide descriptions or explanations of the processes of education. Instructional theories focus on the methods of instruction for teaching prescribed curricula. However, these theories are still in their infancies and need a lot of improvement.

6.5.4.2 Concepts in Education

All the concepts we discuss in education revolve round the factors, components and individuals related to the process of educating. Concepts used in education can be put in two categories:

i. Concepts of education itself Curriculum, syllabus, teaching, vocationalisation, examination, work experience, class, textbooks, teaching-aids, teaching methods, literacy, drop-out, etc.
ii. Concepts of foundational disciplines used in education  
Such as, intelligence, learning, motivation, instruction, technology, cultural heritage, individual differences, achievement, aptitude, attitude, instructional strategy, national and international integration, Software and hardware technology, system approach, social mobility, guidance and counselling, reward and punishment, environment and peace and so on.

According to Yadav and Lakshmi (1995),42 “adopting and utilizing concepts from other disciplines are not barrier to the development of a discipline.” On the criticism that education borrows it concepts from other disciplines they remark, “The criticism would be valid to the extent to which education fails to generate its own connotations to those concepts.” Concepts of other disciplines when used in education acquire special educational character.

Process of educating an individual does not limited to schools only. In its broad sense, various factors affect and shape it. We cannot ignore the sociological and the psychological factors influence this process. Neither can we overlook the philosophical analysis of purpose of education and nature of learner. Due to heavy influence of these foundational disciplines on the process of educating, it is very reasonable to discuss some of the popular concepts of these disciplines in the discipline of education. However, often these borrowed concepts in education are used with an adjective ‘educational,’ which transform them into educational concepts. Here it is necessary to clear that just adding prefix ‘educational’ does not give any concept- an educational meaning instead these concepts are used in special concern and situations which are strictly educational. Therefore, such concepts take essentially educational shape and nature.

For e.g. Concept of Learning when used as the ‘learning of children in class room’ is not used in the same way as a psychologist would use the term. Psychology as a science of behaviour has broad meaning of the term learning. Similarly, all concepts used in education which are seemingly from other discipline, turn at some stage into educational concepts and acquire newer meanings.
Almost, all the disciplines use the concepts of other related disciplines. However, disciplines may have different implications of the same concepts when used in their own intellectual territory.

6.5.5 Criterion-5

‘Disciplines have a specified scope of inquiry and a particular object of research, though the object of research maybe shared with another discipline’.

Discipline of Education: Scope of inquiry and object of research

The scope of inquiry of education is vast. The main objective of discipline of education is to educate man. How to improve theory and practice of education is the main theme of educational enquiry. It investigates all the formal and informal means and methods that directly or indirectly play an important role in the process of educating. Its main objects of research are aims of education, curriculum, classroom, textbooks, teaching methods, examination and evaluation, literacy, policies and practices of education. Its scope of enquiry includes all the factors which affect human learning in one or more way. ‘How to make human learning more feasible?’ is the matter of concern of an educationist. Education refers to that learning which in some way transforms how people see and value things, how they understand and make sense of experience, how they can identify and solve key problems. Such a characterization of education highlights the kind of enquiry or research needed to shed light on educational activities and their assessment and evaluation.

The term “educating” has broad meaning. It is not limited to just teaching or to make somebody learn. It is a complex process of upbringing, nurturing and guiding which promotes growth and make an individual a complete human being. A complete human being possesses distinctive capacities of ‘knowing’, ‘understanding’, ‘judging’, and ‘behaving intelligently’. To bring this perfection or completion education investigates all the stages, events, areas of an individual’s life. Therefore, the scope of enquiry of education starts since the very beginning of life of an individual. No other discipline has such a wide area of investigation.
To investigate each aspect of human learning, an educationist seems to peep into field of interest of other disciplines. While investigating different fields of human life it has to share and overlap field of investigation of other disciplines. For example, while investigating better ways to make a child learn an investigator has to explore not only the educational aspect associated with learning but behavioural, social and environmental aspects too. Therefore, researcher has to cross the boundaries of other disciplines. However, whenever it happens, education uses its own insight, own vision and own attitude, different from styles of other disciplines. For e.g. learning in rats, pigeons, chimpanzees, and men will continue to be a part of the discipline of psychology but learning under the special conditions of boy, book and teacher should be the special concern of education. Furthermore, school learning should be studied in close relation to the purposes and goals of organised education. Although, disciplines differ among themselves their areas of investigation are not completely different from each other. The focus of all disciplines is same; all of them revolve around man and its environment.

During recent years, education has focused on some specialised areas of investigation like woman education, distance education, environmental education, population education, ICT in education, adult education and peace education etc. Therefore, it can be said that there is not a single object for research in education and not a single field of investigation for an educationist. As a field of study, each and every thing is the field of interest of education which affects process of educating human beings in one or another way.

6.5.6 Criterion-6

‘Disciplines have developed specific research methods or recognized/ accepted/ suitable set of techniques/tools/ procedures for generating new knowledge and validating existing knowledge according to their specific research requirements’

Discipline of Education: Research methods

Research is a systematic effort to gain new knowledge in any kind of discipline. When it seeks a solution of any educational problem, it leads to educational research.
Research is required in any field to come up with new theories or modify, accept, or nullify the existing theory. One of the important reasons that education has doubtful disciplinary status is that it borrows and shares research methods with other social sciences and does not have its own method of knowledge generation and validation. In addition, it is also said that educational research has not attained the status of scientific research, its methods are still not flawless, and results are not verifiable. In this concern, D. W. Miller, (1999) refers Diane Ravitch, who writes,

“…..what if, instead of medical researchers, I were being treated by educational researchers? …..I had a fantasy of people disagreeing about how you make a diagnosis… arguing endlessly about whether I was even sick.” (Quoted in R. Pring , 2000)\textsuperscript{43}

Here, Miller shows a general distrust on educational research. The validity of research findings of education faces many criticisms. Richard Pring, (2000)\textsuperscript{44} summarized these criticisms in the following points:

i. Too small -scale and fragmented, constructed on different data bases, such that it is not possible to draw the ‘big picture’;

ii. Non-cumulative, failing to progress on the basis of previous research, forever reinventing the wheel;

iii. Ideologically driven, serving the ‘political purposes’ of the researcher rather than the disinterested pursuit of the truth;

iv. Methodologically ‘soft’ or ‘flawed’, without the rigour either in the conduct of the research or in the reporting of it;

v. Inaccessible in esoteric journals and in opaque language.

It can be tried to prove these criticisms wrong or not applied to most of the researches done in education. However, Pring designates the person ‘a falsificationist’ who could try to dare so. Largely, educational researchers may agree with Mr. Pring and there is no need to bear the tag of ‘a falsificationist’. It is true that many of these criticisms should be taken seriously. Just one thing that should be considered to defend education from such serious criticisms is that nature of educational research is different from sciences and other social sciences. Such criticisms arise when we
compare educational research with scientific research or research in some other more developed social sciences like psychology. The claim of some educationists to consider education as science gives birth to such problems. Before, comparing educational research with scientific research a brief introduction of educational research is given here:

6.5.6.1 Characteristics of Educational Research

The purpose of educational research is to solve educational problem in systematic and scientific manner and to understand, explain, predict and control learner behaviour. Educational research can be characterized as follows:
- It is highly purposeful.
- It deals with educational problems regarding students and teachers as well.
- It is precise, objective, scientific and systematic process of investigation.
- It attempts to organize data quantitatively and qualitatively to arrive at statistical inferences.
- It discovers new facts in new perspective. i.e. It generates new knowledge.
- It depends on the researchers ability, ingenuity and experience for its interpretation and conclusions.
- It needs interdisciplinary approach for solving educational problem.
- It demands subjective interpretation and deductive reasoning in some cases.
- It uses classrooms, schools, colleges department of education as the laboratory for conducting researches.

6.5.6.2 Scope of Educational Research

Being scientific study of educational process, it involves individuals (Student, teachers, educational managers, parents) and institutions (Schools, colleges, research institutes). It discovers facts and relationship in order to make educational process more effective. It relates social sciences like education, sociology and psychology. It includes processes like investigation, planning (design), collecting data, processing of
data, their analysis, interpretation and drawing inferences. It covers areas from formal to non-formal education as well.

### 6.5.6.3 Is educational research a scientific research?

Sciences are broadly divided into natural (or physical) sciences and social sciences. Social Sciences include various disciplines dealing with human life, human behaviour, social groups and social institutions. They consist of Anthropology, Commerce, Demography, Economics, Education, Geography, History, Law, Linguistics, Management, Political Science, Psychology, Public Administration, Sociology, and Social Work. Though these sciences are treated as separate branches of knowledge for the purpose of study, they are interdependent studies of the different aspects of the same object, viz., man.

Scientific progress makes education inclining towards a science rather than an art. Science belongs to precision and exactness. It suffers hardly from any variable. On the other hand, education as a social science suffers from many variables, so goes away from exactness. Educational Research tries to make educative process more scientific. However, education is softening from multivariable, so it cannot be as exact as physical sciences. Research is a scientific endeavour. It involves scientific method. The scientific method is a systematic procedure following the logical processes of reasoning. Scientific method does not belong to any particular body of knowledge or disciplines of science only, it is universal. However, there are certain limitation of education and other social sciences that scientific method cannot be applied here with the same precision as in sciences.

### 6.5.6.4 Limitations of Social Science Research

Research in social sciences has certain limitations and problems when compared with research in physical sciences. They are discussed below:

**Scientist** - a part of what is studied. The fact that a social scientist is part of the human society which he studies gives rise to certain limitations.
Complexity of the subject matter - The subject matter of research in social sciences, viz., human society and human behaviour is too complex, varied and changing to yield to the scientific categorization, measurement, analysis and prediction.

Human Problems
A social scientist faces certain human problems, which the natural scientist is spared. These problems are varied and include refusal of respondents, improper understanding of questions by them, their loss of memory, their reluctance to furnish certain information, etc. All these problems cause biases and invalidate the research findings and conclusions.

Personal Values
Subjects and clients, as well as investigators, have personal values that are apt to become involved in the research process. One should not assume that these are freely exploitable. The investigator must have respect for the client's values.

Wrong decisions
The quality of research findings depends upon the soundness of decisions made by the social scientist on such crucial stages of his research process as definition of the unit of study, operationalization of concepts, selection of sampling techniques and statistical techniques. Any mistake in any of these decisions will vitiate the validity of his findings.

Education and other social sciences are not exact science like physical sciences, as they, unlike the latter, deal with human beings. Human nature and man's environment are so complex that it is more difficult to comprehend and predict human behaviour than the physical phenomena. No two persons are alike in feelings, drives or emotions. No one person is consistent from one moment to another. The behaviour of human beings is influenced by biological, psychological, socio-cultural, temporal and environmental factors. It is difficult to see the underlying uniformities in the diversity of complex human behaviour. A controlled experiment, which is sine qua non of an empirical science, is generally well impossible in education and other social sciences.

According to Best and Khan (2005), although the problems of discovering theories of human behaviour are difficult, it is possible to do so. Behavioural scientists need to carry on their investigations as carefully and rigorously as have physical scientists.
However, one must not overestimate the exactness of the physical sciences, for theoretical speculations and probability estimates are inherent characteristics.

6.5.6.5 Types of educational research

Since education includes other disciplines such as psychology, sociology, anthropology, science, and philosophy and refers to work done in a wide variety of contexts it is proposed that researchers should use "multiple research approaches and theoretical constructs". Research into educational problems is conducted by scholars with many disciplinary affiliations. Most of them have a background in psychology or other behavioural sciences, but quite a few of them have a humanistic background in philosophy and history. During twentieth century, two main paradigms were employed in researching educational problems. The one is modeled on the natural sciences with an emphasis on empirical quantifiable observations that lend themselves to analyses by means of mathematical tools. The task of research is to establish causal relationships, to explain. The other paradigm is derived from the humanities with an emphasis on holistic and qualitative information and interpretive approaches.

According to Best and Kahn, 2005, 47 “The methodologies of educational research are based on research methods in the behavioural and social sciences like psychology, sociology, and anthropology. Research in these fields emphasizes logical positivism, which uses experimental and quantitative research methods. Still some research concern may be addressed more appropriately with a phenomenological, or qualitative, research approach derived from the humanities, particularly history and philosophy, or with qualitative methods from the social sciences (e.g., ethnography from anthropology).” Therefore, according to them educational research can be divided into two broad categories: quantitave research and qualitative research. They further add that both types of research should be thought of as continuum rather than a mutually exclusive dichotomy. A good researcher utilizes a variety of these methods in combination as per requirement.

Educational researchers have also begun to realize that educational practices are not independent of the cultural and social context in which they operate. Nor they are
neutral to educational policies. Thus, the two main paradigms are not exclusive, but complementary to each other. All research utilizes methodologies that combine quantitative and qualitative designs to some extent. Research requirements dictate whether the methodology will be primarily qualitative or quantitative, or a combination of both. The main kinds of qualitative and quantitative research methods in education are discussed below:

6.5.6.5.1 Qualitative Research
Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomenon. Qualitative research is especially important in the behavioural sciences where the aim is to discover the underlying motives of human behaviour. Qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behaviour. Research in such a situation is a function of researcher’s insights and impressions. Such an approach to research generates results either in non-quantitative form or in the form which are not subjected to rigorous quantitative analysis. Generally, the techniques of focus group interviews, projective techniques and in-depth interviews are used. Qualitative research may be of following types:

i. **Historical Research** - the study of a problem in the past that requires collecting information from the past, which serves as the data to be interpreted in the study. It consists of describing what was, rather than what is.

ii. **Biographical Research** - exploration of the life or activities of an individual. A form of historical research that focuses on an individual.

iii. **Phenomenological Research** - understanding the essence of experiences related to a phenomenon or situation. Often utilizes in-depth interviews with appropriate subjects to understand the phenomenon being studied.

iv. **Grounded Theory** - development of a theory (theories) based on data collected from the field through qualitative methodology. Usually utilizes
multiple interviews to obtain the data that provide the basis for the development of theory.

v. **Ethnographic Research** - research consisting of an in-depth, analytical description of a specific cultural (or educational) situation. Ethnography relies heavily on observation, description, and qualitative judgments or interpretations of phenomena occurring in natural settings.

vi. **Case Study** - in-depth analysis of a single case or a few multiple cases. Case studies utilize a variety of information sources to obtain an in-depth understanding of the case under study.

vii. **Ethnomethodology** – Ethnomethodology is concerned with how people make sense of their everyday world. More especially, it is directed at the mechanisms by which participants achieve and sustain interaction in a social encounter – the assumptions they make, the conventions they utilize and the practices they adopt.\(^{30}\)

**6.5.6.5.2 Quantitative Research**\(^ {51}\)

Quantitative research methods were originally developed in the natural sciences to study natural phenomena. However, examples of quantitative methods, now well accepted in the social sciences and education. These are conducted to determine relationships, effects, and causes. Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. Following types of quantitative researches are used in education:

i. **Experimental Research** - research in which at least one variable, the experimental variable, is deliberately manipulated by the researcher to determine the effects of the variation.

ii. **Quasi-Experimental Research** - similar to experimental research except that intact groups are used as subjects of the research (rather than subjects
randomly assigned to experimental conditions). Also included research where single subjects are assigned to experimental conditions.

iii. **Causal-Comparative Research** - research that attempts to establish cause and effect relationships involving group comparisons. Unlike experimental research, however, the (alleged) causal variable is not manipulated by the researcher, it is studied as it occurred at some time in the past. (Also referred to as Ex post facto research.)

iv. **Correlational Research** - research that attempts to determine whether, and to what degree, a relationship exists between two or more variables. The purpose of correlational research is to establish a relationship (or lack of a relationship) or use an established relationship to make predictions.

v. **Survey Research** - research dealing with the incidence, distribution, and relationships of educational, psychological, and sociological variables. Variables are studied, as they exist in the situation. Often, survey research describes how things are.

6.5.6.6 **Nature of Educational Research: Inter-disciplinary Approach**

The nature of educational research is analogous with the nature of research itself, which is systematic, reliable and valid to find the “truth”, investigates knowledge, and solves problems (William Wiersma, 1991). Moreover, educational research process involves steps to collect the information in order to investigate problems and knowledge. However, the educational research is more complex because it can use various approaches and strategies to solve problems in educational setting. It also can involve many disciplines such as anthropology, sociology, psychology, and history. In addition, educational research is important because of contributing knowledge development, practical improvement, and policy information (John W. Creswell, 2005). Therefore, educators can use those research findings to improve their competences and teaching and learning process.
Educational research calls for inter-disciplinary approach, human life and his education cannot be compartmentalized into psychological, social, economic or political aspects. An isolated study of anyone aspect of man's life would not yield any meaningful results. A discipline-specific study of an educational problem from an angle of, say, economics or sociology or political science cannot give a correct and total view of the problem. For example, the problem of backwardness in class should be studied as a psychological, social, and educational issue. The approaches and theories of all these disciplines must be blended to provide a meaningful and valid approach to the problem. According to Yadav, Menon and Kumar, 1982,54 “Education as a discipline is obliquely concerned with the concepts and methodologies of various other disciplines, and resultantly has evolved into an interdisciplinary area of knowledge. Understanding education as a social system would demand analyzing the various societal determinants that influence the evolution and functioning of educational system. This, in turn, would call for an understanding of the philosophical, sociological and other aspects of education.”

It can be interpreted from the above discussion that research in education is interdisciplinary in nature. Due to influence of other social sciences on education of human beings, it shares method of generating knowledge with more developed social sciences and sciences. However, it modifies any method according to nature and objective of the problem under research. Therefore, it is clear that education also has specific research methods and suitable set of techniques, tools and procedures for generating new knowledge and validating existing knowledge according to their specific research requirements.

6.5.7 Criterion-7

‘Disciplines use specific terminologies or a specific technical language adjusted to their research object.’
Discipline of Education: Terminologies or Technical Language

Within all academic disciplines, there are a range of terms and words that are the language of that academic community. This language has evolved and developed within disciplines to communicate particular ways of seeing and thinking specific to that subject. This discipline specific manner of communicating is obviously less familiar to those outside or attempting to enter this academic community.

Since theories, content and methods of education have a great influence of other disciplines. Most of the terms in education are adopted with other disciplines. However, most of the terms are used with a prefix- educational provides an educational meaning to the term. For e.g. educational technology, educational aims, academic achievement, educational implications, agencies of education, school administration, educational guidance. Terms like intelligence, learning, motivation, instruction, technology, cultural heritage, individual differences, achievement, aptitude, attitude, instructional strategy, national and international integration, Software and hardware technology, system approach, social mobility, guidance and counseling, reward and punishment may be used with or without adding any educational prefix but strictly with an educational meaning. There are some other terms which have educational origin such as curriculum, syllabus, teaching, vocationalisation, examination, work experience, class, textbooks, teaching-aids, teaching methods, literacy, and dropout etc.

Like other social sciences, education also shared content and research methods with other disciplines so the technical terminology of educational is also shared with these disciplines. Even the pure disciplines also use terminology of other disciplines for e.g., logic and mathematics have to borrow from languages to express themselves. However, to develop a technical terminology is necessary for any discipline. A well-developed and specific communication language, specific technical terminology related to generation of knowledge and specific concepts provide an academic identity to a discipline. This communication language is generally used by scholars of that discipline and not by an outsider. Thereby, provides a respectable status to that discipline.
It does not matter that many of the terms and concepts in education are adopted from other disciplines, because it is a common practice in almost all the disciplines in academic world. It matters only that the discipline of education also has specific technical language and terminology, which can be identified in any educational conference, publication or institution where education is studied or researched. Anyone can easily recognize speaking an educational personal or his writing as it contains specific educational terms, idioms, phrases and concepts. We can hope that with the ongoing efforts of specialization and improvement of content and methods education would be able to enrich its technical terminology and language soon.

6.5.8 Criterion-8

‘Disciplines have an intimate link with basic human activities and aspirations.’

Discipline of Education: Link with Basic Human Activities and Aspirations

Transmission, preservation and production of acquired knowledge, skills, culture and traditions to its progenies have always been basic human tendencies. Education provides a formal and systematic platform to support these basic human activities. Study of education develop efficient educators for educating different levels of teachers, it is well known that only a teacher can shape the future of our nation by imparting right knowledge, attitude and skills to the children. These children as excellent professionals can fulfil the needs and aspirations of the people in different fields. Thus, education has a direct link with expectation and aspirations of the people.

In addition to, transmission of knowledge and skills about the process of educating, the discipline also has a huge contribution in the form of research and published work. Study and research of education influence various aspects and components of society to a large extent. Its field of investigation includes studying problems of educating special groups for specific issues like teacher education, special education, woman education, adult education, environmental education, peace education and population education. This is the most important function of education to effectively investigate almost all the fields of human life and draw out educationally significant inputs to make their lives better through educating them. Educators not only shape the future of
any society by educating our children but also act as a leader to motivate and guide the people to bring desirable changes in the society.

In addition to its social significance, study of education has a great professional importance too, especially in the modern, complex industrialised societies. To meet the aspirations and needs of all learners in an era of rapidly increasing racial, ethnic and linguistic diversity and technological change education prepares efficient educators, researchers and other professionals, who develop the policies, curriculum, learning materials and methods to fulfill the needs of learners of different groups.

6.5.9 Criterion-9

‘Disciplines must have some institutional manifestation in the form of subjects taught at universities or colleges, respective academic departments, community of scholars or professional associations connected to it.’

As an academic discipline, education has gaining much popularity and importance. Besides the university departments of education and their affiliated colleges, Several government and private institutions at state, national and international levels, community of scholars and professional associations are also working in the field of theory and practice of education.

Broadly, any discipline is mainly concerned with three fields:

1. Teaching (Transmission of knowledge)
2. Research (Production of knowledge)
3. Publication (Preservation of knowledge)

There are concerned institutes, departments, professional bodies and community of scholars for the persuasion of teaching, research and publication in a discipline. Education as a discipline is concerned with all the three fields and has significant contribution in all the three fields. At different levels, there are many professional associations and institutions to extend and monitor the teaching, research and publication in education.
6.5.8.1 Institutional Study of Education

The discipline of education is also unique in its academic study. Perhaps this is the only subject which is taught both as liberal and professional courses at different levels. In our country, study of education in academic settings is started from 10+2 level as a subject in some states boards under arts stream. At university and college level, the subject is taught both academically (B.A. in Education and M. A. in Education) and professionally (B. Ed and M.Ed.). Programs of teacher education are also available in diversified form, suitable for the need of different levels of education. There are different programs of teacher education for primary, secondary and higher education stage. Different institutes also provide education to in-service teachers and special education teachers.

In recent years, education has become one of the most popular subjects opted by students in higher education. In today’s information economy, education has become the engine driving the future of the country and of our children. To obtain a decent job and support a family, children need higher levels of skill and knowledge than ever before. To compete in a global marketplace and sustain a democratic society, our country requires the most educated population in history. For these reasons, the future is in the hands of the nation’s teachers. The quality of tomorrow will be no better than the quality of our teacher force. Several schemes of Government related to expansion of education in our country also necessitated to appoint a large number of qualified teachers at different levels. To raise the quality and quantity of this teacher force ‘study of education’ is gaining tremendous important as a subject at university and college level. Most of the universities have separate faculty and department of education. However, in some of the universities, for e.g., Allahabad University, it is still taught as a subject under arts faculty. There are also many independent colleges of teacher education. Even some engineering and technical colleges have established departments of education. Education especially Teacher’s education and education for teacher educators is the main concern of the mushrooming colleges around the country. India has one of the largest systems of teacher education in the world. Besides the university departments of education and their affiliated colleges, Government and Government aided institutions; private and self-financing colleges and open universities are also engaged in teacher education. The study of education as
a subject has been gaining importance at undergraduate and postgraduate to research levels.

6.5.8.2 Research in education

The nature and process of education of any country is always determined by the sociopolitical conditions of that country. Study and research in education always gain socio-political importance. Due to the urgent need of expansion of education in the country, research in education is attracting many governmental and non-governmental agencies to raise funds and facilities in this direction. Although, educational research is still far beyond than the popularity and significance as the research in sciences, however, it has become one of the most popular fields of research in many social sciences. At present research in education is being conducted by universities’ departments of education in the form of professional research courses like M. Phil., Ph.D. and Post-doctoral programs. Faculty members of university education department are also involved in several major and minor research projects of government and private agencies. Besides universities, National Council of Educational Research and Training (NCERT), State Council of Educational Research and Training (SCERT), National University of Educational Planning and Administration (NUEPA), and Central Institute of Educational Technology (CIET) are the prominent institutions in India involved in exploring innovative processes and practices of education. Some private organizations like Ajim Premji Foundation and Tata Memorial Institute of social sciences are also promoting educational research by providing funds and facilities to the researchers. In addition to Education Departments and institutions, many other disciplines like psychology, philosophy, sociology, economics, management, and anthropology etc. also conduct educationally relevant research.

However, it is distressing to observe that researches in our universities and institutes are largely conducted for obtaining a degree and most of the researches are repetitive and incapable of improving theory and practice of education. Unfortunately, most of the researches are based on some practical and daily life affairs who hardly contribute to enrich study of education as a subject.
6.5.9.3 Publications and professional associations in Education


Professional Organizations and associations for Educators

There is a long list of professional associations engaged in organizing academic activities on education like conferences, seminars, symposium, and workshops. The prominent organizations and professional associations of educationists are:

American Association of School Administrators (AASA), Council for Exceptional Education (CEC), American Educational Research Association (AERA), Association for Educational Communications and Technology (AECT), and American Federation of Teachers (AFT). In India the popular organizations are: National Council of Educational Research and Training (NCERT), State Council of Educational Research and Training (SCERT), National University of Educational Planning and Administration (NUEPA), Central Institute of Educational Technology (CIET), National Council For Teacher Education (NCTE), All India Association of Educational Research (AIAER), and Indian Association of Teacher Educators (IATE) etc. 55

The list of national and international academic associations and publication on education is so long that it is not possible to mention all of them. This long list shows the popularity of this discipline as a subject of study and research around the world. Therefore, education as a discipline has a significant contribution in transmission, production and preservation of knowledge.
6.6.0 Conclusion

As a field of study, education has come a mile apart. As a process, it is as old as the evolution of the human beings. Since the origin of human beings, they started understanding and experiencing their environment by various formal and informal means. As a field of study, it was originated when early human explored and evolved different techniques to make their progeny learn the knowledge, skills and attitudes accumulated by him. However, its history as an academic subject of study and research in institutions is not very old. At present, discipline of education is expanding its horizons in every aspect of human life.

Due to studying influence of various social, philosophical, psychological, political, environmental, anthropological, historical, scientific, economical and commercial factors on the process of education it has developed as a multidisciplinary field of study. Therefore, it is natural to have influence of concepts, theories and research methods of these disciplines on content and methods of education.

In spite of adopting and sharing concepts, theories and methods with other disciplines, it has its own well-defined territory and distinct objectives of study and research. After, critically analyzing education on different characteristics of a discipline it can be said that education in not only a discipline but also a field of study, which uses expertise of different disciplines to study process of educating human beings but in its own distinct way. Therefore, it can be said that discipline of education follows an interdisciplinary and multidisciplinary approach in its study and research like other social sciences.

No other discipline can replace the discipline of education as the studying and researching process of educating is a complex task and only the discipline of education possess the required knowledge, skills and attitude for operating on it. To fulfill this complex and specialized task discipline of education has:

- A recognizable and significant tradition or an identifiable history.
- A unique mode of thinking or different cognitive framework.
- A specified scope of inquiry and a particular object of research.
• A body of accumulated, structured and well organized, specialist knowledge.
• Theories and concepts that can organize the accumulated specialist knowledge effectively;
• Specific terminologies or a specific technical language.
• Specific research methods or recognized/ accepted/ suitable set of techniques/tools/ procedures for generating new knowledge and validating existing knowledge.
• An intimate link with basic human activities and aspirations.
• Institutional manifestation in the form of subjects taught at universities or colleges, respective academic departments, community of scholars or professional associations connected to it.

However, still there is a great need to refine its concepts, theories and methods in order to make its study and research more significant in the academic world. In addition, to provide it a legitimate academic status, there is also an urgent need to discuss and solve various controversies associated with its disciplinary status. In the next chapter, such controversies will be discussed in detail with an analysis of nature and future of education as a subject of study.
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