CHAPTER 3
RESEARCH METHODOLOGY

3.1.0 Introduction
Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it, we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is a set of procedures and techniques, which have been devised to extend knowledge. Research methodology is the study of research methods. Thomas J. Blakeley (1961) writes, “By methods we mean procedure and it is obvious that the principles according to which a procedure is carried out are rules, i.e., imperatives, which tell us not what ‘is’ done, but “what should be done.” According to him, a method is a rational or speculative procedure, carried out according to certain principles or rules, these rules have control over our thinking and are concerned with “what should be done”. According to C. Rai (1980), “The aim of methodology is to find out what these methods are, why they are accepted and how they are interconnected and applied”.

3.2.0 Methods of Research in Education
It is not a simple task to classify educational research. There is no generally accepted scheme. There are usually four different ways of conducting an enquiry in the field of educational research. Practically all studies fall under one, or a combination, of these types:

i. Historical Research According to Best and Khan,3 ‘Historical Research describes what was. The process involves investigating, recording, analyzing, and interpreting the events of the past for discovering generalizations that are helpful in understanding the past and the present and, to a limited extent, in anticipating the future.’

ii. Descriptive research In words of K. P. Pandey,4 In Descriptive research the researcher is concerned with describing the conditions or relationships that exist, practices that prevail, beliefs, points of views or attitudes that are held, processes
that are going on, effects that are being felt, or trends that are developing. Its process involves describing, recording, analyzing, and interpreting conditions that exist. Descriptive research may use quantitative or qualitative methods to describe what is.

iii. **Experimental research** describes what will be when certain variables are carefully controlled or manipulated.

iv. **Philosophical research** describes what should be. It is normative in nature. C. Sheshadri,\(^5\) characterizes philosophical research by level and depth of critical analysis, the probing into the basic assumptions, concept elucidations, synthesis of views, justification of normative assumptions and prescriptions. According to him, philosophical research requires semantic clarity and meaningfulness, consistency and rigour of thought, consciousness of assumptions and methodological awareness.

Philosophical research is a qualitative type of research. Qualitative research is the collection of extensive narrative data on many variables over an extended period, in a naturalistic setting to gain insight not possible using other types of research. Merriam (1988) sets forth six assumptions of qualitative research: it is descriptive; it involves fieldwork; it is concerned primarily with process rather than outcomes or products; it is inductive in that researchers build abstractions, concepts, theory, and hypotheses from details; the researcher is the primary instrument for data collection and analysis; and it is primarily interested in meaning — how people make sense of their lives, experiences, and their structures of the world.\(^6\)

As the present study is dealing with philosophizing an educational issue, the most suitable approach for the present study is philosophical. In the following section, philosophical method is discussed in detail.

### 3.3.0 Philosophical Method

Philosophical method (or philosophical methodology) is the study of how to do philosophy.\(^7\) The basic concern of this type of research is reflection and clarification of assumption and meaning. Philosophical research helps in understanding the area in
its totality and developing clarity. C. Rai defines a philosophical method as a means or instrument of attaining a philosophical end, i.e., categorical and comprehensive knowledge of fundamental notions. Philosophizing may begin with some simple doubts about accepted beliefs.

The initial impulse to philosophize may arise from suspicion, for example, that we do not fully understand, and have not fully justified, even our most basic beliefs about the world. Philosophers offer definitions and explanations in solution to problems; they argue for those solutions; and then other philosophers provide counter arguments, expecting to eventually come up with better solutions. This exchange and resulting revision of views is called dialectic. Dialectic is simply philosophical conversation amongst people who do not always agree with each other about everything.

Doing philosophy is about the journey, the process, as much as it is about the destination, the conclusion. Its method differs from other disciplines, in which the experts can agree about most of the fundamentals.

3.3.1 Nature of philosophical method

C. Rai discusses nature of philosophical methods as put forth by different schools and scholars:

1. Philosophical methods are methods of rational inquiry.
2. Philosophical method is method of determining the meaning of ideas and of clarifying them. (Pragmatism)
3. Philosophical method is a method of settling philosophical disputes. (William James)
4. Philosophical method is a method of rightly conducting the reason and seeking truth in the sciences. (Descartes)
5. Philosophical method is a method of philosophizing or achieving sound knowledge. (Gilbert)

Philosophical methods are regulated by the aim to attain clarity and certainty. Clearness, distinctness, comprehensiveness, and thoroughness are the requisite of every philosophical method.
3.3.2 Steps of Philosophical research

U. C. Vashishtha suggests these steps to be followed commonly in a philosophical research:

3.3.2.1 Identification of research problem

The process of philosophical study starts with the identification of appropriate theme for study. Some popular areas of philosophical research in education are:

- Educational philosophy of any personality.
- Educational implications of any philosophy.
- Comparison of one philosophy with the other.
- Finding a philosophy in a particular system.
- Analytic study of a particular philosophy/idea or thinker.
- Critical analysis of philosophical system/practice or act.
- Understanding philosophy and philosophical issues of a subject.
- Building/synthesizing a concept or philosophy.

3.3.2.2 Review of related literature

Keeping in view the theme identified and the preliminary questions raised therein, the researcher collect all possible data relevant to the theme from the available literature. The sources may be of literary nature, such as write-ups or opinions of the philosophers concerned and commentaries on the relevant philosophical works appearing in the forms of books, journals, transcriptions, recordings, research reports, etc.

3.3.2.3 Reading and discussion

An intensive reading of the selected literature makes the researcher able to comprehend the ideology and to develop his/her own line of thought. A cycle of discussion and re-discussion with experts and colleagues in the concerned field is next step to fill the lacunae between grasped facts.
3.3.2.4 Thinking and contemplating

Philosophical researches need comprehensive and critical thinking and contemplating. A deep speculative thinking on the collected data enables the researcher to find connection and differences between various ideas. Further contemplation clears the doubts and corrects the existing knowledge.

3.3.2.5 Jotting down, systematizing and presenting

In the next step, the data is interpreted keeping in view the main questions raised in a specific context. Interpretation may follow different processes like summarization, description, comparison, appraisal, cross-examination, etc. of different ideas or concepts in the context of major questions under consideration. There is every possibility of reflecting our subjectivity in the process. Essentially, a researcher studies others ideas from his/her own point of view. However, conscious efforts must be made to detach ourselves as much as possible and interpret the ideas of others without being influenced by our personal biases.

The last stage of the work may be identified with reporting of the study. In the report, a logical sequence is maintained between the different heads of classification and appropriate conclusions are drawn towards the end of the presentation. At this stage, care is to be taken for clarity and precision of presentation. Moreover, appropriate references with quotations as well as emphasis on necessary points of presentation are to be cited carefully in the report.

3.3.3 Tools of the philosophical research

Mind is the major tool for philosophical research. Curiosity, sensitivity, passion, ability to think and reason, and arguing are the virtues of the researcher concerned with this type of research. It is essential for him or her to be holistic and impartial in approach.

3.3.4 Ideals of philosophical methodology

Any philosophical method must be regulated by the aim to attain clarity and certainty. Emphasis on starting point rather than on conclusions is necessary for true
philosophical methods. According to C. Rai,$^{13}$ there are some rules, which any philosophical enquiry must observe:

1. **Presupposition less**
Any philosophical enquiry should be free from presuppositions. Freedom from presuppositions means that no determination concerning the particular subject matter of a branch of knowledge should be accepted in advance of investigation. However, it is also true that no method can be wholly divorced from certain presuppositions in the actual content of thought. Therefore, there is no danger in accepting those important presuppositions without which the inquiry itself would be impossible and meaningless. These include the existence of a conscious being, doubt or wonder or curiosity of the inquirer, a concept of truth and error, and the required activity of thought.

2. **Reflection**
Rational reflection distinguishes philosophy from all non-theoretical and theoretical sciences. Reflection is necessary for the sake of correct and clear thinking. Philosophy should reflect over its own problems, methods, starting-points and conclusions. This reflection must be critical, comprehensive and evaluative.

3. **Self-correction**
Every philosophical method should be self-corrective also. Since, if they are not self-corrective they need other methods for their correction.

4. **Progression and regression**
Since reason admits both progressive and regressive directions, philosophical way of thinking must be progressive and regressive. However, it is not possible that the same method can both be progressive and regressive simultaneously. Therefore, two types of method, viz. progressive method as well as regressive method should be followed in philosophy.
5. **Comprehensiveness**
All methods applied in philosophy must be comprehensive so that no method excludes anything arbitrarily.

6. **Meta inquiry**
Philosophy is an inquiry about some inquiry that is it is a Meta inquiry. It is the duty of philosophy to evaluate and criticize other inquiries.

7. **Practical and evaluative**
Philosophy is concerned with purposes and values. As evaluative thinking, philosophy has to weight facts, theories, alternatives and ideals.

8. **Speculation and criticism**
Speculation is needed in philosophy because it is that aspect of human thought, which strives to extend the boundaries of understanding beyond its previously established limits. Philosophy proceeds by criticizing received opinions.

### 3.3.5 Kinds of philosophical method
There is no single philosophical method of solving philosophical problems. C. Rai explains the reason behind it, “there is a close relationship among the mental attitude of a thinker, his conception of philosophy, his philosophical method and the philosophical system. Therefore, it is inadequate to say that every philosopher should accept and apply the same philosophical method. Every method has its own contribution in greater or smaller degrees in the different field of investigation.”

According to C. Rai, broadly, philosophical methods can be divided into two types:

1. **Philosophical method as a way of thinking:** Examples of this type are Dialectic, Analysis, Logico-Mathematical method, Intuitive method, Pragmatic method, Critical or Transcendental method and Phenomenological method.
2. **Philosophical method as a way of demonstrating**: Explanatory, Synthetic and Analytic, Enigmatic, Aphoristic, Mystical, Etymological, Analogical, Poetical, etc. come under this class.

Different conceptions of philosophy, different nature of problems, different sources of knowledge and the subjective factors imply acceptance of different philosophical methods. C. Rai conducted her doctoral dissertation on philosophical methods of research. Broadly, she classifies philosophical methods into following types:

- Dialectic method
- Logico-mathematical and critical methods
- Pragmatic method
- Phenomenological method
- Analysis

### 3.3.5.1 Dialectic method

Dialectic means a method, which proceeds with the help of contradiction and opposition. It is a method of conversation. In Dialectic method, knowledge of opposite is also required. This method includes questions and answers. Sophist introduced dialectics as special debating exercise. Later Socrates used this method to unfold ultimate truths by question and answer. Plato also believed that dialectic enables people to ask question more scientifically. This method recognizes no authority and it aims at achieving two qualities i.e., consistency and agreement. Dialectic method brings to light that knowledge which the mind already possesses.

### 3.3.5.2 Logico mathematical and critical methods

Mathematics has had a great influence on philosophic thoughts. Philosophers wanted to construct philosophy too as the system of certain and self-evident truths. Such a system was possible only by adopting mathematical method. In mathematical method, one begins with self-evident principle. Clearness, strictness, sharpness, impartiality and universal validity of mathematics attracted philosophers to use this method for thinking. This method always includes logical method i.e. deduction and therefore it can be called “Logico-mathematical” method. According to Descartes, mathematical
method consists in discovering the difference between the clear and distinct apprehension of the understanding or reason and the obscure ideas of the sense and imagination. It selects simple, clear, self-evident and innate ideas of reason and deduces other truths from them.

3.3.5.3 Pragmatic method

C. S. Peirce was the first who coined the term “pragmatism.” This is a logical method of ascertaining the meaning of intellectual concepts by reference to practical consequences. Pragmatic method is a middle way between rational and empirical methods. In Peirce’s opinion, meaning of any concept is totality of practical anticipation towards which it leads. This method does not imply any ontology or metaphysics. It reflects the practical experimental outlook of life.

3.3.5.4 Phenomenological method

Phenomenology originated with the profound and creative criticism of British Empiricism and this was inaugurated by Brentano and Husserl. Phenomenology is the study of structures of consciousness as experienced from the first person point of view. Phenomenology is the exploration and description of phenomena, where a phenomenon refers to a thing or experience which human being experience. This method requires following reductions:

i. Exclusion of all subjectivity because it needs purely objective standpoint.
ii. Exclusion of all theoretical knowledge.
iii. Exclusion of all traditions.
iv. Exclusion of all preconceptions and presuppositions.

3.3.5.5 Analysis

Analysis is a very dominant philosophical tendency. It involves "breaking down" (i.e. analyzing) philosophical issues. Analysis may be explained as an understanding of fundamental concepts, other related concepts, and interrelationship between these concepts. According to Foley (1996), “While analysis is characteristic of the analytic tradition in philosophy, what is to be analyzed (the analysandum) often varies. Some
philosophers focus on analyzing linguistic phenomena, such as sentences, while others focus on psychological phenomena, such as sense data. However, arguably the most prominent analysis is of concepts or propositions, which is known as conceptual analysis.  

According to C. Sheshadri, as critical analysis, philosophy of education becomes a meta-level activity of clarification and criticism of concepts, theories, arguments appearing in the primary, on-going activity of ‘education’. The pre-dominant mode today in philosophy (and in philosophy of education) is the critical, analytical mode.

### 3.3.5.1 Forms of Analysis

It is not easy to define the concept of analysis as a contemporary philosophical method. The term analysis has been used in many senses and these different types are not inter-exclusive; they rather overlap each other. Types of analysis include Experimental analysis, Scientific analysis, Mathematical analysis, Speculative analysis, Directional analysis, Psychological analysis, Formal analysis, Clarificatory analysis, Conceptual analysis, Linguistic analysis, Definitional analysis etc. Some main types of analysis as described by C. Rai are briefly discussed as under:

#### i. Speculative or Reflective Analysis

Speculative investigation is reflective analysis of knowledge and truth. In the opinion of Joachim, “nothing but reflective and critical analysis can unlock the secrets of its being or can reveal it as reality is.”

#### ii. Directional Analysis

In directional analysis, direction of analysis is given and determined by the “purpose” of investigation.

#### iii. Formal Analysis

In formal analysis we analyze some external thing, whatever it may be, whether language or object. Its notable feature is that it analyses things “abstractly” or “isolately”, i.e., without its relation to anything. Therefore, we may say that formal analysis is an abstract mental process.
iv. Destructive Analysis and Constructive Analysis

In this type, a thinker may first refute his opponent’s view by destructive use of analysis, and then try to establish his thesis by constructive analysis. Plato’s analysis is generally taken as destructive analysis, but it also, perhaps indirectly functions constructively. Aristotle’s analysis is always considered as an example of constructive analysis.

v. Conceptual Analysis and Verbal Analysis

Sometimes analysis is divided into two general classes according to its object of analysis. Analysis, which pertains to ideas or concepts or propositions, is designated as conceptual analysis and analysis that deals with terms, sentences and statements is called linguistic analysis. This latter type analysis is called, “verbal analysis” by Moore. Russell employed both types of analysis as complementary to each other. Conceptual analysis consists primarily in breaking down or analyzing concepts into their constituent parts in order to gain knowledge or a better understanding of a particular philosophical issue in which the concept is involved.

vi. Definitional Analysis

It means analysis which analyses concepts or terms or objects or rules or uses by way of giving their definition.

vii. Linguistic Analysis

Linguistic analysis is analysis of language in both its semantic and syntactical aspects. Semantically, it analyses a complex word or sentence into simple reals and syntactically it discovers those linguistic inter-relations among reals which form a complex concept.

viii. Critical Analysis

In the present study, critical analysis has been used to analyze the proposition of ‘education as a discipline.’ Critical analysis can be defined as the intellectually
disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.\textsuperscript{25} Generally, critical analysis involves following activities:\textsuperscript{26}

- Agreeing with, acceding to, defending or confirming a particular point of view.
- Proposing a new point of view.
- Conceding that an existing point of view has certain merits, but that it needs to be qualified in certain respects.
- Reformulating an existing point of view or statement of it so that the new version makes a better explanation.
- Dismissing a point of view on the grounds of its inadequacy, irrelevance, incoherence etc.
- Rejecting, rebutting or refuting another’s arguments on various reasoned grounds.
- Reconciling two positions which may seem at variance by appeal to some higher or deeper principle.

According to Moore, the aim of philosophical analysis is not to improve in any way our ordinary use of terms, which remains unchanged by what is done in philosophy. The central aim of analysis, for Moore, is the “clarification of concepts”, not the discovery of “new facts” about the world. Thus, “conceptual clarification” is the sole aim of Moore’s analysis and, secondly, these concepts are not of scientific terminology but of commonsense language.\textsuperscript{27}

3.4.0 Methodology of the present research

The present study deals with philosophizing an educational issue, hence philosophical approach is most suitable for the present study. Analytic philosophy has been the dominant way of philosophizing. Here researcher used critical analysis to examine and interpret the various views regarding nature of education as a discipline. Later, researcher synthesized different views to reach conclusion. At various phases of the
study, the researcher engaged in library study, discussions, critical analysis, contemplation and drawing of relevant conclusions. Detailed steps of the methodology followed by the researcher for collection and analysis of data are discussed below:

3.4.1 Library study
In order to develop a proper foundation of the problem under study researcher consulted various libraries. Researcher tried to find out relevant matter on the themes like- knowledge and its evolution; meaning, nature and evolution of disciplines; criteria of a discipline and nature of education as a discipline etc. Researcher started her search from departmental library and Tagore library of University of Lucknow and also consulted library of Indian Council of Philosophical Research (ICPR) and some other local libraries. However, here she could not found much relevant literature; only few books on ‘knowledge’ and books related to B.Ed. & M.Ed. courses were available in these libraries. Literature on academic disciplines was not available here. Therefore, to proceed further researcher consulted libraries of NCERT, NUEPA and JNU in Delhi. Here researcher found some books and journals containing articles and essays related to the problem under study.

With the study of written material researcher also scanned the available literature on the internet. A vast amount of literature was available there but only few websites provided relevant and authentic material. Rest was simple repetition of some previously published/uploaded work.

3.4.2 Discussions
After acquiring basic knowledge of the problem under study researcher discussed the topic with the colleagues, departmental faculty, educational experts and supervisor. Such discussions varied from informal and formal conversations to in-depth discussions. After a cycle of discussion and re-discussion researcher came up with some major issues related to the problem under investigation. On these issues, researcher made a list of questions (given at Appendix B) for further discussing the problem in detail with some specialists of the field. The names of experts consulted for in-depth discussions are given at Appendix A. During such discussions, with the
permission of the expert, the researcher recorded the conversation using an audio tape and also took written notes. Immediately after the discussion, the researcher expended the written notes while the information is still fresh in her mind. The interpretations were made later at the phase of analysis.

To continue the cycle of discussions researcher also delivered some lectures on the major issues of the study with the help of power point presentations in the department. In such lectures, researcher presented views of experts and her own for an open discussion. Such lectures were followed by group discussions. In such group discussions researcher tried to understand others’ point of view and improved her knowledge related to the topic. Such sessions also helped the researcher to fill the lacunae in the grasped facts. A cycle of discussion and re-discussion was repeated to collect as much knowledge as possible. A list indicating the names of the participants in the group discussions is given at Appendix C.

3.4.3 Critical analysis, synthesis, organization of ideas and drawing out relevant conclusions

The last and most important step of the study was putting all the available thoughts and ideas in a systematic way for analysis and synthesis to reach a conclusion. The data available for analysis were of different nature due to collected from different sources. The collected data can be put into following categories:

i. Data available in the form of written material

Such data were collected during library study from different sources like books, journals, essays, articles, encyclopedias, syllabi and from different websites.

ii. Data available in the form of opinions

Such data were collected during discussions in the form of written notes or audio recordings.

For the purpose of analysis, collected data were categorized according to different objectives and issues related to the study. Analysis of data involved breaking of complex concepts into further simpler concepts, defining these concepts and
examining them critically. For the analysis of nature of education as a discipline, concept, evolution, nature, classification and characteristics of a discipline were analyzed first. After that, Researcher critically examined the nature of education as a discipline in the light of opinion given by other scholars and her own. Researcher also tried to see connections between key concepts and other related concepts. Both the views in support or opposition of disciplinary status of education were equally treated without any personal influence or bias. Finally, synthesis and organization of ideas and thoughts in a systematic manner were done objective wise. Thus, the process used here is a cycle of reading, thinking, discussing, deducing and writing.

In this chapter, methodology of the present study was discussed in detail. In the following chapter meaning, evolution and classification of discipline will be discussed.
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