3. Design of research.
4. Collection of data.
5. Analysis of data.
6. Formulation of conclusions.

First Step

The problem is selected and defined. The feasibility of the problem depends on its delimitations. Hence, the problem is also delimited in this step.

Second Step

Some tentative solutions are given for the problem when these solutions are based on certain rationale they are termed as hypothesis. Therefore, in this step hypotheses are formulated.

Third Step

These hypotheses are subjected to verification. A design of research is developed for collection of data or evidences for testing the hypotheses. It involves method, sample and techniques of research. The appropriate method and techniques are selected for this purpose.

Fourth Step

The observations and research tools are administered on the subjects and their responses are scored out. Thus, the obtained data are organized in tabular form.

Fifth Step

The appropriate statistical techniques are used to analyse the data so that some decisions may be taken about the hypotheses. The results are used to draw some conclusions.

Sixth Step

The results are discussed and some conclusions are drawn in the form of new information, theory, facts and solution for the practical problems.

These steps are followed in both types of research: fundamental and action research, but there is significant difference between the two. The comparison of fundamental and action research has been provided in the tabular form on next pages.

Objectives of Action Research

The action research projects are conducted for achieving the following objectives:

1. To improve the working conditions of school plant.
2. To develop the scientific attitude among teachers and principals for studying their problems.
3. To develop the scientific attitude among students and teachers for understanding and solving their problems.
4. To bring excellence in school workers.
5. To develop the ability and understanding among administrators to improve and modify the school conditions and make it more conducive to learning.
6. To root out the traditional and mechanical environment of school.
7. To make the school system effective for generating a healthy environment for student learning.
8. To raise the level of performance and level of aspiration of the students.

Fields of Action Research

The action research projects may be designed in the following field of Social Studies:

1. In improving and modifying the classroom teaching strategies, tactics and teaching aids.
2. In developing interests; attitudes and values of the students towards their studies.
3. In dealing the classroom problems and school problem relating to discipline and code of conduct.
4. In assigning the home work so that students should take interest in completing them.
5. In improving the spelling errors and wrong pronunciation.
6. In dealing with the problems of poor attendance in class as well as In school and coming late in school.
7. In developing the habit of completing class notes and active participation.
8. In removing the practice of copying in the examination.
9. In solving the personal problems of students relating to school situations or poor adjustment.
10. In dealing with the problems of school administration organization.

Characteristics of an Investigator

A good research worker should possess the following qualities:

1. He should have the full understanding about the functions and activities of his job.
2. He should have the reflective thinking about various dimensions of his job activities.
3. He should be sensitive towards his job. A sensitive person can perceive the problem. Most of the teachers are problem blind because they are not sensitive towards the job.
4. He should be creative and imaginative. These abilities are essential in formulating the action hypotheses for his problem.
5. He should have the knowledge and training of action research. .
6. He should have insightful into his area. During his teaching experience he can identify the real problem on the basis of his insight.
7. He should have the scientific attitude for studying and observing things.
8. There should be an objectivity in his thinking.
9. His behaviour should be democratic. The action research design should not intervene the activities of other teachers of school activities.
10. The most important characteristics is the patience and pursuant of the investigator.
11. He should have knowledge and skill of measuring instruments and elementary statistics.
12. He should have open mind so that he can discuss his problems with his colleagues and experts of the field to have correct picture of the problem.
13. He should have an urge to bring about excellence in job economical performance.
14. He should be economical in designing the project from time, energy and money point of view.

Steps of Action Research

In designing and conducting action-hyper-research project the following steps are followed :

1. Identification of Problem

A teacher should be sensitive towards job activities. The problem is isolated from the broad field. The investigator must realize the seriousness of the problem.

2. Defining and Delimiting the Problem

After Identifying the problem. it should be defined so that action and goal may be specified. The delimitation means to localize the problem in terms of class subject, group and period in which a teacher perceives the problem.

3. Analysing Causes of the Problem

The causes of the problem are analysed with the help of some evidences. The nature of the causes is also analysed whether it is under the control or beyond the control of the investigator. This helps in formulating the action hypothesis.

4. Formulating the Action Hypotheses

The basis for the formulation action-hypotheses are the causes of the problem which are under the approach of the investigator. The statement of action-hypothesis consists of the two aspects: action and goal. It indicates that the action should be taken for achieving the goal.

5. Design for Testing the Action Hypothesis

A design is developed for testing the most important action-hypothesis. Some actions may be taken and their results are observed. If the hypothesis is not accepted second design is developed for testing another hypothesis. In action-research one hypothesis is tested at a time. The design of action-research is flexible and can be changed at any time according to the convenience of the researcher.

6. Conclusions of Action Research Project

The accepting or rejecting the action-hypothesis leads to draw some conclusions. The statement of conclusion indicates some prescription for the practical problem of school or classroom. The conclusions are useful in modifying and improving the current practices of school and classroom teaching.

The National Council of Research and Training has been taken interest in the action research projects. The extension departments of NCERT have been conducting seminars and workshops for in service teachers for imparting knowledge and skill of action research projects. It has developed Its own paradigm of action I research projects.

A Paradigm of Action Research Projects

The steps and sub-steps are proposed by NCERT for conducting action research projects:

1. Topic of the project.
2. Objective of the project.
3. The system of the project work.
4. Evaluation of the project.
5. Estimation of expenditure for the project.
6. Name of the institution, number of students enrolled with sections.
7. Number of teachers in different subjects.
8. The available facilities in school for the project work.
   (*a*) Background for the project work.
   (*b*) The importance of the project for the school.

(*c*) Identification of problem.
(*d*) Defining and delimiting the problem.
(*e*) Formulation of action hypotheses.
(*f*) Testing the action hypotheses.
(*g*) Conclusions of the project work.
(*h*) Remarks by the investigator.

On these lines the teacher plans an experimental project, after conducting the experiment he writes a report of his project work.

Experimental Project of Action Research

The experimental project is designed for solving the problem of English teaching.

1. *Topic of the Project*

A study for improving the spelling errors in English.

2. *Investigator*

An experienced teacher of English.

3. *Background for the Project Work*

The English teacher has observed and experienced that students commit more errors in English spellings. He has noted several types of spelling errors in student's home assignments compositions, translation and their written work.

4. *Objectives of the Project*

This project is designed and conducted for achieving the following objectives:

(*i*) To make sensitive to students for their spelling errors in English.
(*ii*) To improve the English spellings of the students.
(*iii*) To promote the level of achievement in English.
(*iv*) To realize the need and importance of correct spellings in English language.

This project is directly conditioned by these objectives.

5. *The Importance of the Project for the School*

English is the second language but it is the international language.

Even in our country we can exchange the ideas with the persons living in every con mer. It is only the media of communication in our country as well as abroad. It is an important language. Therefore students must learn English correctly.

6. *Field of the Problem*

The field of project is the spelling errors in English language.

7. *Specification of the Problem*

The problem is located in class IX A, period second at DAV Inter College Dehradun. The students of this class commit several types of spelling errors in English.

8. *Analysing Causes of the Problem*

The causes of the problem are identified objectively so that tentative solutions may be developed for the problem. The causes are analysed with the help of following table.

	Causes	*Evidence*	*Nature*	*Control*
1.	The students do not complete their written work attentively and seriously.	By observing the written work of students in English Language.	Fact	Under the approach of the teacher
2.	They do not give due attention to spelling during their study.	By administering recognition or recall types test.	May be fact of Conjecture	Under the approach of the teacher
3.	The teachers do not give due importance to spellings during their teaching.	Inquiring from the students and supervising their written work.	May be or Conjecture	Under the approach of the teacher
4.	The students are lacking in the pre-requisites do not have clear understanding of English grammar.	Oral questions may be asked on English grammar and previous knowledge	Fact	May be or may not be under the approach of teacher.

The analysis of the causes of the problem provides the basis for the formulation of action hypotheses.

9. *Formulation of Action Hypotheses*

The following two action hypotheses have been developed by considering the causes which are under the approach of the English teacher.

First Action Hypothesis: The modification and improvement may be done in English spelling errors by proper correction of English written work.

The first part of Action Hypothesis indicates goal and later part is the action to be taken for achieving the goal.

Second Action Hypothesis: The spellings of words and their meanings should be emphasized by the teacher to improve the spelling errors in English teaching.

The first part of this action hypothesis refers to the action part and second part indicates the goal.

The action hypotheses are tested by using separate designs of the project.

10. *Design for Testing Action Hypothesis*

The first action hypothesis is tested by employing the following design of the project.

The data are collected during the project work if the evidences indicate significant improvement in spellings of English words. There is no need to test the second hypothesis.

11. *Evaluation*

The evaluation of the project work is done in terms of accepting and rejecting the. hypothesis. The bar diagrams are prepared for the spelling errors. The percentages of errors are calculated to analyse the

improvement in English spellings. Some spelling tests may be administered to examine the significance of improvement in english spellings.

The conclusions may be drawn in the form of remedial measures for the problem.

	Initiation of Activities	*Technique*	*Source*	*Time*
1.	The teacher will prepare a list of different types of written work of English.	He will discuss this issue to other English teachers	Text-books and prescribed syllabus.	Two days
2.	The teacher will prepare an outline of his written work of his whole session or semester.	By considering the papers of English which has been assigned to him.	Programme of the whole session and time table.	Three days
3.	The teacher will assign written work I every week of different nature.	The students work load may be considered in assigning the written work.	By consulting the teachers of other subjects regarding home work.	Four weeks
4.	The teacher has to check the written work of English properly and will assign some grades or marks.	The written work may be checked before the students or in their absence.	He can take help of good students of English.	Four weeks

12. *Comments of the Investigator*

After testing the hypothesis teacher may improve the teaching techniques and instructional procedure. The teacher can minimise the English spelling errors. He can promote the level of achievement in English.

Suggestions for Action Research Project

In developing an action research project the following suggestions should be kept in mind:

1. The nature of the project should be decided whether it is developmental project or experimental project.
2. The investigator must be directly associated with the problem to be studied.
3. The form of problem should be real.
4. The project should be so planned that it should not intervene the functioning of other school working.

5. The project should be concerned directly with qualitative improvement and level of performance of the students.
6. The project should be evaluated objectively by employing reliable and valid tools.
7. The action hypothesis should be formulated by considering the causes of the problem which are under the approach of the investigator.
8. The design of action research project should be economical from money, time and energy of view.
9. The problem should be selected objectively and studied scientifically.
10. The causes of the problem should be isolated objectively on the basis of some evidences.

Difference between Action Research and Fundamental Research

The Research has two main functions:

– To contribute new knowledge in Social Studies.

– To improve the Social Studiesal practices.

The first function is of fundamental research and second function of action research. Difference between the two has been given in the tabular form.

Difference between Fundamental Research and Action Research

Action Research	*Fundamental Research*
1. Purpose The improvement in school and classroom teaching process.	Fundamental Research Contributes new knowledge in the form of new theory, facts and truth.
2. Investigator The person is in the job teacher, principal inspector and administrator. Investigator must be directly associated with the problem. There is no pre-requisite of academic qualifications.	The investigator should have postgraduate degree in the subject. He should have specialization in the field. He may or may not be related with the problem.
3. Problem The form of the problem is very narrow. It is a local problem. It is practical problem. The problem is selected and finalized by the worker or investigator himself. No external approval is required.	The problem is broad and relates to the broad field of Social Studies. The problem may be selected by the researcher but it is approved by the external experts.
4. Hypothesis The action hypotheses are formulated on the basis of the causes of the problem. An action hypothesis needs one design of research. One hypothesis is tested at one time.	The hypotheses are formulated on the basis of some retionale. All the hypotheses are tested by one design of research. The hypothesis is not essential in all types of research.
5. Design The design of action research is flexible. It can be changed according to the convenience of the worker. It includes certain steps and measuring tools.	The design is rigid and it can not be changed. Theoretical and practical knowledge is essential for the researcher. It involves method, sample and techniques of research.

Action Research	*Fundamental Research*
6. Sampling There is not problem of sampling in action research, accidental or incidental sample is used. The students of a class or school is the sample of action research. Non-probability techniques is used.	It is the basis of research and sampling is the major problem. The knowledge and training of sampling techniques are essential, usually probability sampling techniques is employed. The true representative sample is selected by using an appropriate technique of sampling from the population.
7. Data Collection Observation and teacher made tests are used for collecting data in action research. The standardized tool may be used if it is available.	Usually the standardized tests are used for collecting data in basic research. If the tools of such types are not available the investigator has to prepare the tools and its reliability and validity are estimated.
8. Analysis of Data The data are analysed by using statistical technique to draw some results. Simple statistics: percentages mean mode, S.D. and graphical representation are employed for this purpose. The decision is taken about solution of the problem.	The parametric statistical techniques are used for analysing the data. The knowledge and understanding are essential. The decision is taken about the hypotheses on the basis of data or evidences.
9. Conclusions Some conclusions are drawn about the solution of the problem. The conclusions are in the form of remedial measures for improving the current practices. It does not contribute to the fund of knowledge.	The conclusions are in the form of generalization. The generalization may be a new theory or new fact or new truth or new interpretation. Thus, the conclusions may be the new knowledge in the field studied.
10. Evaluation The action research project is evaluated by the investigator himself and no external evaluation is required. Its results are in the form of improvement in the job and current practices.	A panel of examiners is appointed for examining the report of fundamental research. It may be approved, or revised or rejected. The degree of Ph.D., D.Sc. or D.Phil. is awarded for the worth contribution in the field studied.
11. Finances The finances for the action research are met out by the school or investigator himself. The extension deptt. of NCERT are also financing such projects.	The U.G.C. is awarding Junior research fellow and senior research fellowships for fundamental research in all the, subjects. The NCERT is financing research projects of Social Studies. The U.G.C. is also giving financial, assistance to college teachers for their research work. An investigator also bears the expenses himself.
12. Training The teachers are trained in B.Ed. and L.T. programmes for the knowledge and skill of action research concept. The extension departments are organizing workshops for action research projects for in-service teachers.	There is a compulsory paper of Research Methods and Statistics of M.Ed., M.B.A. and M.Phil. levels for the knowledge and understanding of research methodology. During this programme the students have to submit a dissertation for the practical knowledge of conducting research work.

Action Research	*Fundamental Research*
12. Training The teachers are trained in B.Ed. and L.T. programmes for the knowledge and skill of action research concept. The extension departments are organizing workshops for action research projects for in-service teachers.	There is a compulsory paper of Research Methods and Statistics of M.Ed. and M.Phil. levels for the knowledge and understanding of research methodology. During this programme the students have to submit a dissertation for the practical knowledge of conducting research work.
13. Scope The field of action research work is very narrow. It deals with the problems of classroom teaching and school. The field is local.	The field for basic research is broad. It deals with the basic problems of Social Studies and teaching learning situations.
14. Examples The problem of assignment, spellings, pronunciation and poor attendance. The enrolment of school is reducing rapidly are the major problems of action research in the field of Social Studies.	(*a*) Teaching skills for different subject teachers (languages, social studies science). (*b*) Behaviour patterns or effective teachers and creative teachers. (*c*) Difference between trained and untrained teachers performances.
15. Importance The major importance for solving the local problems of school and classroom teaching.	The major importance is to answer the basic questions and contribution to the field of knowledge by solving the basic problems of Social Studies.

Exercises

1. Define the term 'Research', Enumerate the characteristics of research. Give a comprehensive definition of research.
2. Define the term 'Research'. Describe the specific features of Research,
3. Enumerate the main objectives of research and explain them in detail.
4. Describe the various classification of research, Differentiate between fundamental research and action research. Elaborate your answer with examples.
5. Describe the steps of research. Enumerate the objectives of action research.
6. Plan an action research project and describe the various steps which are followed in completing the project.

Chapter 2

Assortment of Problem

Research is not only to develop the process or to find a formula as we do in the science.But in the field of social science the research work is oriented towards the solution of a problem or to seek an answer of a question. The first step of a research process is to identify a problem. The selection of a problem is governed by reflective thinking. Unthinking activity is governed too completely by tradition or by emotion. Primitive life was largely without effective reflective thought, until some intelligent individual conceived of a new solution for an old problem. Therefore. upper educational groups ever do much careful ordered thinking. The normal human mind thinking may be classified into four categories: convergent, divergent reflective and scientific thinking. In reflective thinking individual conceived for a new solution for an old problem, but scientific thinking is in terms of carefully organized reflection.

REFLECTIVE THINKING

The reflective thinking implies two components: mastery of the situation or content plus divergent thinking or creative thinking. The reflective thinking acts in terms of problem situation, therefore, it involves the following steps:

1. The occurrence of a felt need or difficult.
2. Definition of the problem in terms of a problem statement.
3. Occurrence of a suggested explanation or possible solution or hypothesis or tentative theory.
4. The rationale elaboration of an idea through the development of its implication by means of collection of data or evidences.
5. Collection of the ideas and formation of concluding belief through experimental verification of the hypothesis.
6. Conclusions and formulation of generalizations. It is recognized that at every level of generalization the human mind may act through these steps. The research process involves inductive-deductive mode of thinking which is known as scientific thinking.

SCIENTIFIC THINKING

The scientific thinking is defined as an inductive-deductive mode of thinking or reasoning in which one seeks to explain the uniformities of nature by appealing to experiences.

- Induction moves forward from particular to the general.
- Deduction is backward movement from general to particular.

The scientific thinking starts with facts and continually returns to facts to test and verify its hypotheses. It is based on empirical evidences and establishes cause and effect relationship. The sources of evidences are based on the following methods: customs and traditions, authority, personal experiences, syllogistic reasoning, self-evident proposition and scientific inquiry and experimentation. These methods

of seeking truth have continued to the present day and form man's current intellectual equipment for solving problem of life. Man in his quest for truth has appealed in general to five sources, of evidences.

1. Custom and Tradition

The majority of man's opinions, attitude and actions will be as they are, because he knows, desires or has time to discover nothing better. The customs of his times and traditions of his people will decide such things for him. His clothes, speech, food and mode of living are largely determined in the same manner. There is necessary human economy but the fact that a thing is, or has always been so is employed as its justification. The result may be an appealing intellectual stagnation. When man recognized his own mental inadequacies in this respect, a great step forward was taken in the development of human thinking.

2. Authority

Average man with his belief in magic charms and the supernatural appealed to the tribal wise man and gods in times of crises. These practices have been superseded by secular and religious authorities in civilized nations.

Aim, content, methodology of education was determined by the authority of religion or nation. With the growth of strong secular states, the balance of power passed from religion to states, and the appeal was addressed to kings parliaments and legislatures.

Other sources of authority are found in nations, Scholars, philosophers and scientists.

3. Personal Experience

When confronted with a difficult situation. one naturally turns first to his own experiences in similar situation for the idea of what to do. If his own experiences are inadequate, he may turn to those of friends and acquaintances. History offers the means by which the experiences of people are extended from the remote time and places to the present. It is subjected to gross inaccuracies. The following are the important sources of errors:

(*a*) Argument from a single or limited number of instances.
(*b*) Argument from positive instances and neglect of negative instances.
(*c*) Avoidance of evidence contrary to one's opinion.
(*d*) Failure to observe important circumstances affecting to different phenomena.
(*e*) Erroneous conclusions due to preconceived ideas and prejudices.
(*f*) Inaccurate instruments of measurement, dependence upon subjective judgement, estimates and gross.
(*g*) Argument from analogy.

4. Syllogistic Reasoning

From apparently self-evident propositions. A great advance was made when man began to think about his own thinking. The product of early intellectual efforts was deductive logic founded by Aristotle. The Chief instrument of deduction was the syllogism, composed of a major premise, a minor premise and a conclusion e.g.

All sinners deserve punishment
'A' is a sinner

∴ A also deserves punishment.

The essence of such syllogistic reasoning consists chiefly in showing that a given particular case falls under general rule. This method purported to furnish good mental training.

SOME DISTINGUISHING CHARACTERISTICS OF SCIENTIFIC THINKING

There are six main features of scientific thinking:

1. Scientific thinking is based upon cause-effect relationship and evidences.
2. It involves certain principles and certain assumptions.
3. Every scientific thinking employs hypotheses to verify the concepts.
4. It is free from emotional bias, personal prejudices and it is highly objective.
5. It utilizes accurate measurement and observation to contribute in situation.
6. Scientific thinking employs quantitative analysis in the treatment of data for drawing conclusions.

STEPS IN THE PROCESS OF SCIENTIFIC THINKING

The logically related, the following steps are involved in scientific thinking:

1. The location and definition of a problem.
2. The survey of past experiences with problem of previous investigations that are already available.
3. The formulation of hypotheses representing a tentative solution of the problem. All the activities are organized for the verification of the hypotheses (collection of data statistical techniques etc.).
4. The collection of new data or evidences.
5. The analysis of the data classification and summarization by quantitative treatment.
6. The formulation of generalizations.

CHARACTERISTICS OF A GOOD RESEARCHER

In selecting a problem, it is very essential for an investigator to possess the following characteristics:

1. He should be sensitive in his nature.
2. He should be problem-minded.
3. He should have mastery on the area and should have specialization in the field studied.
4. He should have a scientific outlook about the area.
5. He should have deep insight into the educational process.
6. He should be able to think reflectively on the field studied.
7. He should have tolerance and patience.
8. He should be interested in the field studied.
9. He should be honest and devotee to his work.
10. He should have the curiosity to find out something new or to answer some questions which are still to be answered.

IDENTIFICATION OF A PROBLEM

The identification and analysing a research problem is the first and most crucial step of research process. A problem can not be solved effectively unless a researcher possesses the intellect and insight to isolate and understand the specific factors giving rise to the difficulty.

The present research scholars understand that identification of a problem means to select a topic of a research or statement of the problem. It is wrong to think so. A topic or statement of the problem and research problem are not the synonymous but they are inclusive. The problem concerns with the functioning of the broader area of field studied whereas a topic or title or statement of the problem is the verbal statement of the problem. The topic is the definition of the problem which delimits or pin points the task of a researcher.

It is the usual practice of the researches that they select the topic of the study from different sources especially from research abstracts. They do not identify the problem, but a problem is made on the basis of the topic. It results that the researcher has no involvement in his research activities. Whatever they do, do mechanically.

Since identifying the exact nature and dimensions of a problem is of major importance in research work, it is very essential that an investigator should learn how to recognize and define a problem. He should proceed step by step in locating the research problem. The following steps are to be followed in identifying a research problem:

Step 1 : Determining the field of research in which a researcher is keen to do the research work.

Step 2 : The researcher should develop the mastery on the area or it should be the field of his specialization.

Step 3 : He should review the researches conducted in area to know the recent trend and studies in the area.

Step 4: On the basis of review, he should consider the priority field of the study.

Step 5: He should draw an analogy and insight in identifying a problem or employ his personal experience of the field in locating the problem. He may take help of supervisor or expertee of the field.

Step 6 : He should pin-point specific aspect of the problem which is to be investigated.

For example a researcher wants to work in the field of teacher-education which is the field of his interest. He has the deep insight and mastery over the area. On the basis of review and his personal experience, the researcher perceives a problem in the field of teacher-education programme that training institutions and colleges of education are not able to produce effective teachers although large number of such institutions have been opened after independence. This problem has the several dimensions but these can be studied simultaneously. The researcher further visualizes that the potential candidates are not admitted in this programme. A question arises: Are the potential candidates admitted in our teacher-education problem? Thus, the procedure of identification of a problem can be shown with the help of a paradigm.

The following are the major tasks to be performed in analysing a problematic situation as given below:

1. Accumulating the facts that might be related to the problem.
2. Setting by observations whether the facts are relevant.
3. Tracing any relationship between facts that might reveal the key to the difficulty.
4. Proposing various explanations for the cause or the difficulty.

5. Ascertaining through observations and analysis whether these explanations are relevant to the problem.
6. Tracing relationship between explanations that may give an insight into the problem solution.
7. Tracing relationship between facts and explanations.
8. Questioning assumptions underlying the analysis of the problem.
9. Tracing the irrelevant facts which are not concerned with the problem.
10. Locating the irrelevant explanations which are not related to the problem.

After going through these processes, the researcher will be able to define or state the problem.

SOURCES OF PROBLEMS

The selection of a suitable problem is not an easy task. It is a serious responsibility to commit oneself to a problem that will inevitably require much time and energy and which is so academically significant. The following are the main sources to which one may proceed for a suitable research problem:

1. Personal experiences of the investigator in the field of education are the main source for identifying suitable problem. Many of the problems confronted in the classroom, the school or the community lend themselves to investigation and they are perhaps more appropriate for the beginning researcher than are problems more remote from his own teaching experiences.
2. The other source of problem which is most frequently used by the investigator as suggested by the supervisors, is the extensive study of available literature-research abstracts, journals, hand-books of research international abstracts etc. He can draw an analogy for selecting a research problem or can think parallel problem in the field studied.
3. In the choice of a suitable problem, the researcher has to decide his field of investigation. He should study the field intensively in the specific area, this may enable him to identify a problem from the specific field.
4. The new innovations, technological changes and curricular developments are constantly bringing new problems and new-opportunities for Social Studies Research.
5. The most practical source of problem is to consult supervisor, experts of the field and most experienced person of the field. They may suggest most significant problem of the area. He can discuss certain issues of the area to emerge a problem.
6. It is a general practice that researchers suggest some problems in their research reports. The researcher can pick up a suitable problem for his own study.

CRITERIA FOR SELECTION OF THE PROBLEM

The factors are to be considered in the selection of a research problem both the criteria external and personal. External criteria have to do with such matters as novelty and importance for the field availability of data and method, and institutional or administrative cooperation. Personal criteria involved such considerations as interest, training, cost and time, etc.

Thus criteria for the selection of the problem suggested by Good and Scates are as follows:

1. Novelty and avoidance of unnecessary duplications.
2. Importance for the field represented and implementation.

3. Interest, intellectual curiosity, and drive.
4. Training and personal qualifications.
5. Availability of data and method.
6. Special equipment and working conditions.
7. Approachability of the sample.
8. Sponsorship and administrative cooperation.
9. Hazards, penalties and handicaps.
10. Cost and returns.
11. Time factor.

1. Novelty and avoidance of unnecessary duplication

The question of novelty or newness is not merely one of duplication of earlier investigations. It involves the regency of the data summarized especially in the case of survey studies made during a period of great Economic, Educational and Social change.

2. Importance for the field represented and implementation

This criterion of importance in choice of a problem involves such matters as significance for the field involved, timelines and practical value in term of application and implementation of the results.

Scientific research in Education, psychology and social sciences in general have an especially urgent obligation to play a social role rendering service to society and humanity.

3. Interest, intellectual curiosity and drive

One of the personal motives of research most frequently mentioned by scientists themselves is pure curiosity, accompanied by genuine interest and a drived satisfaction and enjoyment.

4. Availability of data and method

The data under consideration must meet certain standards of accuracy, objectivity and verifiability.

5. Special equipment and working conditions

The major purpose of equipment is to define the process of observation-to provide control of conditions and accuracy or permanence of recording.

6. Sponsorship and administrative cooperation

It is a common practice for the thesis to be sponsored by a faculty adviser in whose area of specialization the problem lies.

7. Costs and returns

The candidate must consider carefully his own financial resources in the light of such facilities and assistance as can be provided by the institution.

8. Time factor

As a general rule the minimum amount of graduate work for the Master's degree is one year, and for the Doctor's degree three years.

Historical, experimental case and longitudinal genetic studies frequently require more time than the several types of normative survey work.

Hildreth Hoke McAshan has proposed an objective guide for judging the merits of a problem. The following questions may be raised for this purpose.

1. Is the problem really important?
2. Is the problem interesting to others?
3. Is the chosen problem a real problem?
4. Does the problem display originality and creativeness?
5. Am I really concerned with finding the solution?
6. Am I able to state hypotheses from the problem in a testable form?
7. Will I learn something new from this problem?
8. Do I understand the relationship of this specific problem to the broader problem area?
9. Will be able to select a sample from which I can generalize to some population?
10. Will some other intelligent person be able to replicate the study?
11. Will my proposed data-gathering instruments actually give the Information which I want?
12. Is the study, including the application of its results, practical? The number of affirmative answers should be required for a suitable problem.

DEFINING A PROBLEM

Defining a problem means "To pin-point the problem or defining a problem to reach the core of the problem i.e. threadbare analysis."

(*a*) Need of defining a problem

The definition of a problem serves the following purposes:

1. The definition of a problem sets the direction of the study.
2. The definition reveals the methodology or procedure of the study.
3. The definition helps the researcher to control subjectivity or biases of the researcher.
4. The definition of the problem suggests and specifies the variables to be taken up into the investigation through a problem involved into so many variables.
5. The-definition makes the research work practicable.

(*b*) Precautions are to be taken in identifying the problem

The following precautions should be taken into consideration for identifying problem.

1. The words used for defining a problem should have a single meaning.
2. The statement of the problem must be brief but comprehensive.
3. The assumptions are to be recognised for the study.
4. The problem should have practical importance in the field of Education.
5. The definition or the statement of the problem should have certain rationale.

(*c*) Steps in defining a problem

The following steps are to be followed in defining a problem:

1. Researcher should have to develop a conceptual framework of the problem. The conceptual framework should be such that it can be stated into verbal form.
2. Delimiting the elements of the problem.
3. Classifying the elements in the homogeneous group.
4. Locating the key-points in the conceptual framework.
5. Evaluating the theoretical security of the problem.
6. The final form of the statement can be given into verbal form to a conceptual framework of the problem.
7. Deciding the practical difficulty in conducting the study.

1. *Analysis of the Problem into its Elements*

The major problem is subdivided into subordinate questions or problems. The definition of the problem is really the planning of the investigation with an indication of the data and techniques needed to answer. The questions raised. The Schematic Analysis of a problem has been shown in Fig. 1.

Schematic Analysis of a Problem

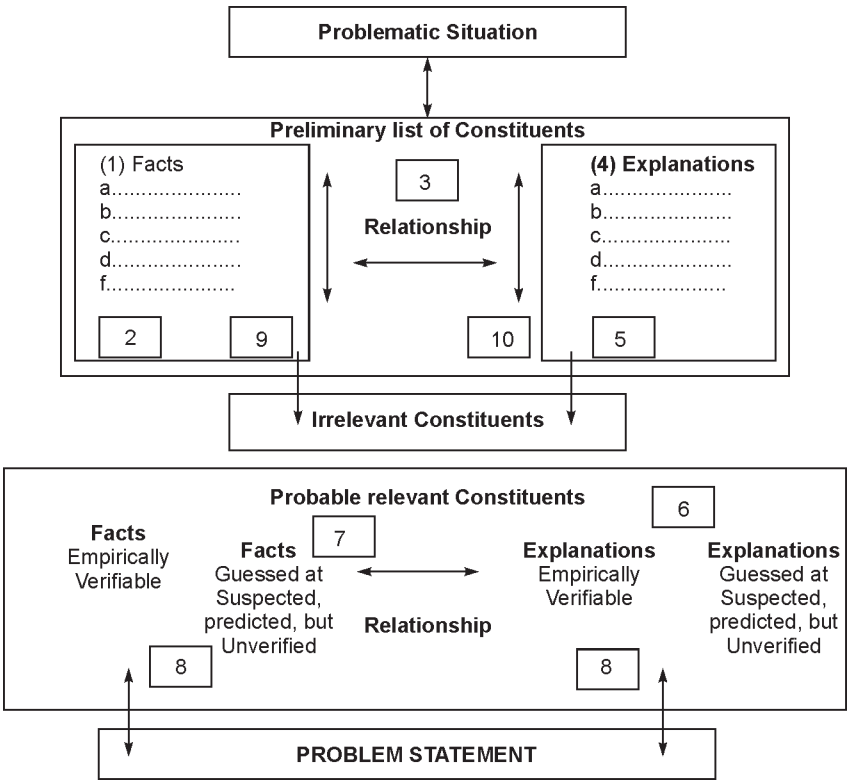

Fig. 1.

2. *Orientation and Related Literature*

Avoidance of unnecessary duplication in the selection of the problems suggest library procedures that should provide the setting for the investigation under consideration and an over view of the related studies. Detailed information concerning use of the appropriate library guides and illustrative review of

the literature in Mrticular area given in fourth chapter. Even though it may rot be feasible in Some report of research to devote a section or chapter of earlier investigations in the same field: The worker himself is obligated to make critical examination of such related studies. Literature may come hypotheses, suggestive methods of research and comparative data useful in the interpretation of results.

Source of Data and Methods

For adequate definition of the problem sources of data and methods for securing evidences must be carefully selected and clearly outlined in the introductory section of the report. Therefore as a matter of intellectual honesty and for accuracy of interpretation and reporting any limitation in sources and procedure must be pointed out frankly but no apologetically.

Terminology

Technical terms and words or phrases with special meaning should be defined.

Initial Assumptions

Research like geometry begins with certain basic assumptions or postulates. Assumptions underlie each step of research. They should be stated not only in the definition of the problem and procedure, but also with the conclusions of which they are an integral part.

(*d*) Ways to Define the Problem

The following are various ways of defining a problem:

1. Analyse the major problems or problems in terms of subordinate problems.
2. Statement delimits the scope of the study.
3. Orientation of the problem in an unique direction:
   (*a*) A historical account, remote or recent.
   (*b*) A survey of previous study or related studies.
   (*c*) An analysis of previous studies or related subjects.
   (*d*) Preliminary survey.
4. Description of the general nature of the problem.
   (*a*) Type.
   (*b*) Source.
   (*c*) procedure.
5. Statement of limitations of the technique employed.
6. Recognitions of assumptions and Implications.
7. Importance-value or significance of the study of education.
8. Definition of terms.

STATEMENT OF PROBLEM

After selecting a problem, it should be stated carefully the researchers to delimit his task and isolate a specific problem before he can proceed with active planning of the study. This type of decision is culminated in the problem statement.

Kerlinger has identified three criteria of good Problem Statements.

1. A problem should be concerned with relation between two or more variables.
2. It should be stated “clearly and unambiguously in question form.”

3. It should be amenable to empirical testing.

Meeting these criteria in his problem statement will result, on the researcher's part, in a clear and concise idea of what he wants to do, this sets the stage for further planning.

CHARACTERISTICS OF A PROBLEM

Although selecting a research problem is one of the most difficult step for a student in a research process, it is unfortunately one for which the least guidance can be given.

A problem statement must have the following characteristics:

1. It should ask about a relationship between two or more variables.
2. It should be stated clearly and unambiguously, usually in question form.
3. It should be possible to collect data or answer the questions asked.
4. It should not represent a moral or ethical position.

1. Relationship between Variables

In this kind of problem the researcher manipulates a minimum of one variable to determine its effects on other variables, as opposed to a purely descriptive study in which the researcher observes, counts or in some way measure the frequency of appearance of a particular variable in a particular setting. For example how many students in school have I.Q.'s in excess of 120.

Since no attempts need be made to deal with a relationship between variables, this problem requires only a "book-keeping" procedure, if however, the problem were worded; Are boys more likely than girls to have 1.0.'s in excess of 120 then it would involve the relationship between variables?

2. The Problem is Stated in Question Form

The problem should be in question form as:

1. What is the relationship between 1.0. and achievement?
2. Do students learn more from a directive teacher or a non directive teacher?
3. Is there a relationship between racial background and dropout rate?
4. Do more students continue in training programmes offering stipends or in programmes not offering stipends?
5. What is the relationship between role learning ability and socio-economic status?

3. Empirical Testability

A problem should be testable by empirical methods, that is, through the collection of data. Moreover, for a student's purposes, it should lend itself to study by a single researcher, on a limited budget, within a year. The nature of the variables included in the problem is a good clue to its testability. An example of the kind of problem that is wise to avoid it: Does an extended experience in communal living improve a person's outlook on life? In addition to the magnitude and probable duration of studying such a problem, the variable themselves would be difficult to manipulate or measure.

4. Avoidance of Moral or Ethical Judgements

Questions about ideals or values are often more difficult to study than questions about aptitudes or performance, as, that would be difficult to test are: Should men define their feelings? The ethical consideration should also be taken into consideration in defining or stating a problem.

CLARIFYING AND STATING A PROBLEM

It is essential for a researcher before he proceeds with his study that he converts his tentative topic into a precise researchable problem. Since a problem is broad infinite therefore it is wise for the researcher to delimit or to narrow the range of the problem in terms of his interests and skill. The problem mentioned in this chapter can be stated in the following way:

Problem: "Analysing the potentials of teacher-effectiveness." This statement is still vague and does not provide any direction to the researcher. It may be restated to clarify the study.

Restatement: "A study of relationship between predictors and criteria of teacher-effectiveness."

This statement indicates the specific task to be performed by the researcher that he has to study the relationship between predictors as independent variables and criteria 'as the dependent variables.

Problem: "The relation of socio-economic status to creativity." It is also vague statement of a problem. It can be clarified and restated in the following way:

Restatement: "A comparative study of the performance of student of different socio-economic status on the items of the Baquer Mehdl creativity test.

Areas of the Research: Educational philosophy, Sociology, Educational Curriculum development, Institutional material, Learning process, Teaching methods, Teacher-education, Teachers behaviour, Educational administration and supervision, Educational technology, etc.

DELIMITING A PROBLEM

Delimiting a problem is very important. A study should be delimited by the following aspects:

1. A study should be delimited to certain variables that should be mentioned clearly in the problem.
2. The study is delimited to the area or level as primary level, secondary level, college or university level.
3. Again study is delimited to size of sample. Considering the time, energy and money, but it should be a representative.
4. Method of Research: A Problem or study may be conducted by different methods but it is not possible. Therefore, the best method should be used so that the study should be delimited to the method only.
5. *Measuring Instrument*: In behavioural science number of instruments are available but all tools can not be used to measure Thus the best available tool will be used for measuring the variable.
6. *Techniques of Research*: A number of techniques can be used for analysing data but most appropriate techniques should be used.
7. The other limitation should vary from problem to problem as every problem has its own delimitations.

These delimitations may help the researcher for conducting the study and the findings of studies also confine to these delimitations.

ASSUMPTIONS ABOUT THE PROBLEM

A good statement of a problem is based on some assumptions. An assumption is the supposition that it is taken for granted to better establish the scope, frame of reference and conditions under which the study will be conducted. The following are the major purposes of assumptions:

1. It makes the research work feasible.
2. It delimits the scope of the problem.
3. It establishes the proper frame of reference.
4. It sets forth certain conditions of the study.
5. It aids in the development of testable hypotheses.
6. It helps in establishing the population and extent of generalization.
7. It also determines the statistical limits for accepting and rejecting of hypotheses.

The assumptions are essential features in the building of scientific model which helps in critical analysis:

EVALUATING THE PROBLEM

1. Before the proposed research problem can be considered appropriate, several searching questions should be rasied. Only when those questions are answered in the affirmative can the problem that can be effectively solved through the process of research. Do the data exist upon which a solution may be based ?
2. Is the problem significant? Is an important principle involved ? Would the solution make any difference as far as educational hero and practice are concerned? If not, there are undoubtedly more significant problems waiting to be investigated.
3. Is the problem a new one? Is the answer already available? Ignorance of prior studies may lead a student to need spend less time on a problem already investigated by some other worker.

   While novelty or originality is an important consideration, the fact that a problem has been investigated in the past does not mean that it is no longer worthy for study. Previous investigations might be using newer and better devices and procedures, but there is also a need for the testing of former findings under changed cultural conditions.
4. Is the problem feasible? After a researcher's project has been evaluated, there remains the problem of suitability for a particular researcher. While the problem may be a good one, as may be a good problem for me. The question arises, will I be able to carry it through to a successful conclusion? Some of the questions that should be raised are:
   (*a*) Do I have the necessary competence to plan and carry out a study of this type? Do I know enough about this field to understand its significant aspects and to interpret my findings? Am I skilful enough to develop administer, and interpret the necessary data-gathering devices' and procedures? Am I well grounded in the necessary knowledge of statistical techniques?
   (*b*) Are pertinent data accessible? Are valid and reliable data gathering devices and procedures available ? Will school authorities permit me to contact the students to conduct necessary experiments or administer necessary tests, interview teachers or have access to important cumulative records? Will I be able to get the sponsorship necessary to open doors that otherwise would be closed to me ?
   (*c*) Will I have the necessary financial resources to carry on this study? What will be the expense involved in data-gathering equipment, printing, test, materials, travel and clerical help? If the project is an expensive one, what is the possibility of getting a grant from a philanthropic foundations or agency?

(*d*) Will I have enough time to complete the project? Will there be time to devise the procedures, select the data gathering devices, gather and analyse the data, and complete the research report? Since most academic programmes impose time limitations, certain worthwhile projects of a longitudinal type are precluded.

(*e*) Will I have the courage and determination to pursue the study inspite of the difficulties and social hazards that may be involved ? Will I be willing to work aggressively when data are difficult to gather and when others are reluctant to co-operate? Will I be willing to risk the criticism, suspicion, or even opposition that a delicate or controversial study may raise? Sex education, racial integration, communism, and other controversial problems are almost certain to stir up emotional reactions in certain quarters.

THE RESEARCH PROPOSAL OR SYNOPSIS

A research proposal or research synopsis or an outline of proposed works required by many universities and institutions, serves as a useful basis for the evaluation of a project as well as a guide line for the researcher. The synopsis contains a clear and concise statement of the problem, the hypothesis involved, a recognition of the significance of the problem, definitions of the important terms, assumptions and limitations, a resume of related literature, an analysis of proposed research producers, and a time schedule. This proposal or synopsis is placed before the research degree committee to examine its worth. The final approval is given by this committee at university level. It is like a blue print of research project.

The preparation of a research proposal or synopsis is an important step in the research process. A worthwhile research work is likely to result only from a well-prepared and well-designed proposal or research synopsis. A research proposal includes. the following essential parts:

1. The Problem and statement of the problem.
2. The Review of literature or theoretical framework of the study.
3. The Hypotheses and objectives.
4. The Methodology and procedure of the study.
5. Educational implications or significance of the problem.
6. Definitions, assumptions and delimitations.
7. A tentative structure of the report.
8. Bibliography.

1. The Statement of the Problem

This attempt to focus on a stated goal gives direction to the research process. It must be limited enough in scope to make a definite conclusion possible. A problem suggests a specific answer or conclusion. The statement of the problem should be written in specific clear-cut words.

2. The Review of Related Literature

A brief summary of previous research should be given so that the researcher and reader may be familiar with what is already known and with what is still unknown and untested. The effective research is based upon past knowledge, this step helps to eliminate replication of what has been done and provides useful basis for the formulation of hypotheses and deciding the methodology of the study. A review of related literature should conclude with a comment of area of agreement and disagreement in findings.

3. The Hypotheses

A scientific study is based on hypotheses. It may be appropriate here to formulate a major hypotheses and several hypotheses. This approach clearly establishes the nature of the problem and the logic underlying the investigation. The hypothesis indicates the expected outcomes the investigation. The formulation of the hypotheses in advance of the data- gathering process is necessary for an unbiased investigation. The hypotheses should be first stated in positive or substantive form.

In every investigation hypotheses can not be formulated but objectives of the study can be written to indicate the direction of the research work.

4. Methodology and Procedure of the Study

This part of the proposal outlines the entire research plan. Under this part of the synopsis method, sample, population, tools and statistical analysis techniques are described in view of testing the formulated hypotheses. It describes just what must be done, how it will be done, what data will be needed, what data-gathering devices will be employed, how sources of data will be selected, and how the data will be analysed and conclusions be drawn.

5. Educational Implication or the Significance of the Problem

It is important part of research synopsis in which research points out the answer to the question or the solution to the problem may influence educational theory or practice. The implication of the finding of the study helps to give the project an urgency, justifying its worth. Social Studies Research study must have its implication to educational practices.

6. Definitions, Assumptions and Limitations

The statement of the problem or topic of the study includes some terms. These terms or variables should be defined clearly. At this stage operational definitions of terms are usually given in research proposal so that statement of the problem must convey the specific meaning. The variables of the study should be defined clearly and unambiguously in operational terms.

A study involves several variables which play different roles in the investigation. The role of the variable depends on the assumptions of the study. The sample of the study will be representative of the population. The assumptions of the study vary study to study.

The feasibility of an investigation depends on the delimitations of the study. A study is delimited to its variables, sample, method, tools and statistical techniques of the study. These delimitations should be clearly mentioned in the synopsis of the study.

7. Structure of the Report

A tentative structure of the report is also written. It includes the list of chapters which will be included in the report of the thesis. These may be: Introductory or a theoretical framework. Review of literature, Methodology and procedure of the study. Data collection and Analysis of data, conclusions of the study.

8. Bibliography

The last part of the proposal provides the list of references in the form of bibliography which includes books of research, or conceptual framework, hand-books encyclopaedia, journals and unpublished and published thesis on the related area of the study.

A proposal of research or synopsis is usually written in third person i.e. he or she or investigator, and in present or future tense. It is submitted to research degree committee's approval. This committee approves as it is or suggests some modifications or rejects the proposal. The researcher can begin only after the approval of the proposal by the committee.

CRITERIA FOR EVALUATING PROPOSAL OR SYNOPSIS

Various agencies establish their own criteria for evaluating proposal of research project. The following are the some criteria which are commonly used for this purpose:

1. Significance of the proposed research for Indian education, including:
   (*a*) Importance of the problem area from the standpoint of basic knowledge of problems of Indian education.
   (*b*) Likely magnitude of the addition that will be made to knowledge if the project is successful, including the generalizability of the results.
2. Quality of the proposed research project, including such considerations as :
   (*a*) Extent to which the application exhibits through knowledge of pertinent previous work and relates the proposed research to it.
   (*b*) Likelihood of success of the project.
   (*c*) Adequacy of design, methodology and tools, where appropriate.
3. Qualifications of the investigator and professional personnel as evidenced by :
   (*a*) Experiences and previous research productivity.
   (*b*) Quality of the discussion and analysis in the application.
4. Adequacy of the facilities and arrangements available to the investigator to conduct the proposed study.
5. Reasonableness of the budget for the work to be done and the anticipated results. These criteria should be incorporated in preparing a research proposal.

EXERCISES

1. Research work is guided by reflective thinking, not by traditional or conventional thinking. Comment on this statement.
2. Indicate the sources of research process. Enumerate the steps of the research process.
3. Give the sources of research problem. How a problem is identified? Enumerate the criteria for the selection of a problem.
4. Why is it necessary to define a problem and delimiting a problem?
5. How is a problem stated? Describe the various ways of defining a problem.
6. Discuss characteristics of good problem and criteria for evaluating a problem.
7. What do you understand by the Research proposal? Give the structure of Research proposal. Enumerate the criteria for evaluating the Research proposal.