

Educational Research

1. Meaning

Educational research refers to the systematic collection and analysis of data related to the field of education. Research may involve a variety of methods and various aspects of education including student learning, teaching methods, teacher training, and classroom dynamics. It is the process of scientific inquiry to solve the problems of educational sector and it includes theoretical elaboration, quality enhancement matters, policy draft and implication, classroom dimension and so forth. It involves a continuous enquiry in search of knowledge, advancement, problem solving methodology and an attempt to realize the truth from an objective point of view based on factual understanding and systematic study.

According to Mouly, **“Educational Research** is the systematic application of scientific method for solving educational problem.”

Travers thinks, **“Educational Research** is the activity for developing science of behaviour in educational situations. It allows the educator to achieve his goals effectively.”

According to Whitney, **“Educational Research** aims at finding out solution of educational problems by using scientific philosophical method.”

Educational Research Characterizes 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 is based on some philosophic theory.
- 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.

2. Steps

Step 1: Identifying the Gap in Knowledge

The researcher, on the basis of experience and observation realises that some students in the class do not perform well in the examination. So he / she poses an unanswered question: Which factors are associated with students’ academic performance?

Step 2: Identifying the Antecedent / Causes On the basis of experience, observation and a review of related literature, he / she realises that students who are either very anxious or not at all anxious do not perform well in the examination. Thus, he / she identifies anxiety as one of the factors that could be associated with students’ academic performance.

Step 3: Stating the Goals The researcher now states the goals of the study:

1. To ascertain the relationship of anxiety with academic performance of students.
2. To ascertain the gender differences in the anxiety and academic performance of students.
3. To ascertain the gender difference in the relationship of anxiety with academic performance of students.

Step 4: Formulating Hypotheses. The researcher may state his / her hypotheses as follows:

1. There is a significant relationship between anxiety and academic performance of students.

2. There is a significant gender difference in the anxiety and academic performance of students.

3. There is a significant gender difference in the relationship of anxiety with academic performance of students.

Step 5: Collecting Relevant Information The researcher uses appropriate tools and techniques to measure anxiety and academic performance of students, selects a sample of students and collects data from them.

Step 6: Testing the Hypotheses

He / she now uses appropriate statistical techniques to verify and test the hypotheses of the study stated in Step 4.

Step 7: Interpreting the Findings

He / she interprets the findings in terms of whether the relationship between anxiety and academic performance is positive or negative, linear or curvilinear.

He / she finds that this relationship is curvilinear i.e. when a student's anxiety is either very low or very high, his / her academic performance is found to be low.

But when a student's anxiety is moderate, his / her academic performance is found to be high.

He / she now tries to explain this finding based on logic and creativity.

Step 8: Comparing the Findings with Prior researchers' Findings

- The researcher tries to find out whether his / her conclusions match those of the prior researchers or not. If not, then the researcher attempts to find out why conclusions do not match with other researchers by analysing prior studies further.

Step 9: Modifying Theory

On the basis of steps 7 and 8, the researcher speculates that anxiety alone cannot influence academic performance of students. There could be a third factor which influences the relationship between anxiety and academic performance of students.

This third factor could be study habits of students. For instance, students who have very low level of anxiety may have neglected their studies throughout the year and hence their academic performance is poor. On the other hand, students who have very high level of anxiety may not be able to remember what they have learnt or cannot concentrate on studies due to stress or may fall sick very often and hence cannot study properly. Hence their academic performance is poor.

However, students with a moderate level of anxiety are motivated enough to study regularly and systematically all through the year and hence their academic performance is high.

Thus, the loosely structured theory on students' academic performance needs to incorporate one more variable, namely, study habits of students. In other words, it needs to be modified.

Step 10: Asking New Questions

- Do study habits and anxiety interact with each other and influence academic performance of students? i.e. we can now start with a fresh topic of research involving three variables rather than two.

3. Scope

Name of Educational Research changes with the gradual development occurs with respect to knowledge and technology, so Educational Research needs to extend its horizon. Being scientific study of educational process, it involves:

- individuals (Student, teachers, educational managers, parents.)
- institutions (Schools, colleges, research institutes)

It discovers facts and relationship in order to make educational process more effective. It relates social sciences like education. It includes process like investigation, planning (design) collecting data, processing of data, their analysis, interpretation and drawing inferences. It covers areas from formal education and conformational education as well.