



## RESEARCH IN EDUCATION

## From the Editor's desk...

Research is a systematic inquiry to describe, explain, predict and control the observed phenomenon. Research involves inductive and deductive methods. Inductive methods analyze the observed phenomenon and identify the general principles, structures, or processes underlying the phenomenon observed; deductive methods verify the hypothesized principles through observations. The purposes are different: one is to develop explanations, and the other is to test the validity of the explanations.

One thing that we have to pay attention to research is that the heart of the research is not on statistics, but the thinking behind the research. How we really want to find out, how we build arguments about ideas and concepts, and what evidence that we can support to persuade people to accept our arguments.

### **There are four types of knowledge that research contributed to education as follows:**

1. **Description:** Results of research can describe natural or social phenomenon, such as its form, structure, activity, change over time, relationship to other phenomena. The descriptive function of research relies on instrumentation for measurement and observations. The descriptive research results in our understanding of what happened. It sometimes produces statistical information about aspects of education.
2. **Prediction:** Prediction research is intended to predict a phenomenon that will occur at time Y from information at an earlier time X. In educational research, researchers have been engaged in:
  - Acquiring knowledge about factors that predict students' success in school and in the world of work
  - Identifying students who are likely to be unsuccessful so that prevention programs can be instituted.
3. **Improvement:** This type of research is mainly concerned with the effectiveness of intervention. The research approach includes experimental design and evaluation research.
4. **Explanation:** This type research subsumes the other three: if the researchers are able to explain an educational phenomenon, it means that they can describe, can predict its consequences, and know how to intervene to change those consequences.

### **What are the purposes of educational research?**

1. **Basic Research:** The purpose of this research is to understand and explain, i.e. the research is interested in formulating and testing theoretical construct and propositions that ideally generalize across time and space. This type of research takes the form of a theory that explains the phenomenon under investigation to give its contribution to knowledge. This research is more descriptive in nature exploring what, why and how questions.
2. **Applied Research:** The purpose of this research is to help people understand the nature of human problems so that human beings can more effectively control their environment. In other words, this type of research pursues potential solutions to human and societal problems. This research is more prescriptive in nature, focusing on how questions.
3. **Evaluation Research (summative and formative):** Evaluation research studies the processes and outcomes aimed at attempted solution. The purpose of formative research is to improve human intervention within specific conditions, such as activities, time, and groups of people; the purpose of summative evaluation is to judge the effectiveness of a program, policy, or product.
4. **Action Research:** Action research aims at solving specific problems within a program, organization, or community. It describes that design and data collections in action research tend to be more informal, and the people in the situation are directly involved in gathering information and studying themselves.

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