

Importance and Necessity of Research in Education

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Abstract

Education is an extremely important field in today's life. To be able to bring the country to develop and grow, it can only be thanks to education. If you say education is important, then educational research is also a very important thing. Research will show good points to promote, bad points to overcome in teaching and learning so that education can go in the right direction. At present, there are pockets of excellent practice in teacher education in different parts of our country, including some established models and some innovative new programs based on the model of 'research-informed clinical practice'. However, in each of the four nations there is not yet a coherent and systematic approach to professional learning from the beginning of teacher training and sustained throughout teachers' working lives. There has been a strong focus on the use of data to inform teaching and instruction over the past 20 years. There now needs to be a sustained emphasis on creating 'research-rich' and 'evidence-rich' (rather than simply 'data-rich') schools and classrooms. Teachers need to be equipped to interrogate data and evidence from different sources, rather than just describing the data or trends in attainment.

Key Words: classification, data, educational research, evidence, focus, findings, sources

Introduction

The term research consists of two words, 'Re'+ 'Search'. "Re" means again and again and "Search" means to find out something. Actually research is simply the process of arriving at a dependable solution to a problem through the planned and systematic collection, analysis and interpretation of a data as revealed by Best, & Kahn (1998). Boykin (1972) stated that research in the field of education is the more formal, systematic and intensive process of carrying on a scientific method of analysis. Research in education primarily aims at systematic investigation of educational problems and tries to provide possible solutions to those problems. Research in education has enabled significant progress to be made in curriculum development and reform, educating learners with difficulties, understanding the individual differences and preferences and in adapting methods of instruction to the needs of individual learners.

The priority for all stakeholders (Government, national agencies, schools, universities and teachers' organisations) should be to work together to create a national strategy for teacher education and professional learning that reflects the principles of 'research-informed clinical practice'. Rather than privileging one type of institutional approach, these principles should be applied to all institutional settings and organisations where teacher education and professional learning takes place.

Characteristics of Research in the Field of Education

Characteristics of research are as follows:

- a) Research is a systematic and critical investigation to a phenomenon embedded in our society and education system.
- b) Research aims at interpreting and explaining a phenomenon logically and systematically by adopting a scientific method.
- d) Research is based on empirical evidences and observable experience and develops generalizations, principles or theories and is directed towards finding answer to the questions and solutions to the education related problems.
- e) Research in education deals with social, educational, economical and cultural phenomena related to process, product and system of education and studies human behaviour and their feelings.

f) Research in education field is carried out on both for discovering new facts and verification of the old ones and tries to establish casual connection between various human activities, social institutions and teaching learning process.

Purposes of Research in Education

a) Research provides answer to questions of what, when, how and why of man, social life and institutions. The main purpose is to discover various facts and their inter relationship and to help us to discard distortions and contribute to our understanding of reality.

b) The another purpose of research is to diagnose different problems prevalent in our society and education system and to make critical and logical analysis of those problems. Our society has innumerable problems such as poverty, unemployment, economic and gender inequality, social stratification etc. and these problems put impact on our education system. The nature and dimensions of such problems have to be diagnosed and analyzed. An analysis of problems leads to an identification of appropriate remedial actions.

c) Research provides first hand information about the nature of social and educational institutions. This knowledge helps us to control over the social phenomena. Research also has potential to investigate and assess latest needs and level of advancement.

d) Another important purpose of research is to suggest possible remedial measures and effective solutions to various problems and challenges. Researchers come up with innovative and creative strategies and ideas to improve the education system and its associated components. Researchers can identify the causes of existing evils and problems and thus it can help in taking appropriate remedial actions.

Research is an imperative area in not just the field of education but in other fields as well. It purifies the workings and the lives of the individuals. It primarily focuses upon improving quality and is a search for knowledge. It shows how to make provision of solutions to problems in a scientific and methodical manner. It is a systematic effort to acquire new knowledge in all disciplines. The main purpose of this research paper is to understand the significance of research in education. Educational research is termed as providing solutions to any educational problem. The main areas that have been taken into account in this research paper include, types of research, significance of statistics in research, meaning and features of educational research, steps of research in education, types of educational research, benefits of research in education, challenges of research in education, implementation of research in education and ethical considerations of research.

Research-Types:

- I. **Qualitative Research:** It includes opinion, suggestion, comment by researchers in the form of article, blog, thesis, Research journals etc. It aims to provide meaning, feeling, and analysis of a particular topic. It cannot be represented on a graph. It navigates how and why of decision making.
- II. **Quantitative Research:** It includes numbers and statistics in the form of graphs, charts, diagrams, and figures showing a systematic analysis of data. It helps in understanding the information easily with minimum confusion. This type of data is used when you want to show the numerical figures or if you are talking about a survey or experimental research. Quantitative data is used to simplify a large sum of data collected on a big scale and helps in proper analyzing it. With more amounts of data, you can obtain accurate results. One such research type is a combination of these two Quantitative and Qualitative data known as mixed data.

Applied Research

It focuses on analyzing and solving real-life problems using the scientific method. This type refers to a study that helps solve practical problems using scientific methods. Studies play an important role in solving issues that impact the overall well-being of humans. For example: *finding special cure for a disease*¹.

Steps of Research

To achieve the desired result procedure of research has to be followed. You just can't browse the internet without having a clue of what you need to do first. Research done without a plan or procedure is a waste of time and also the desired result would not be achieved. Ask yourself two questions before engaging yourself in research.

Why you are doing it? How are you going to do it? You need a plan for what you are searching for and how to extract the relevant information useful for you. Following are the steps in the research process:

1. **Identify a problem** The first and most important thing is to identify a problem. Once the problem is identified we can think about the root cause of that problem.
2. **Define the problem** It answers 'How are you going to do it'? The problem being addressed must be properly analysed before going deep into the ocean.
3. **Objectives** It helps to define what your result is. What do you want to achieve? It shows what you want to achieve and helps to convey to your learner about your piece of work?
4. **Hypothesis** A hypothesis is a tentative statement about the relationship between two or more variables. It is a specific, testable prediction about what you expect to happen in a study. It is the crux of the whole research procedure to be followed.
5. **Data Collection** Data collection sources are of two types

Primary source and Secondary source:

Primary sources are that source whose data has been taken first handed and is the authentic source for collection of data.

Secondary source on the other hand is the second-hand source of collecting data. It can be either review of people, their comment on a particular field, their opinions, blogs, articles, Research papers.

6. **Data Analysis** This is the second step of the Data collection process in which collected data is analyzed. In Quantitative data, a study of graphical representation, graphs, pie charts and bar graphs are studied using mathematical calculations and data are analysed. Scientific methods and mathematical formulae like mean, mode, median; ANOVA, ANCOVA, t-test etc. help in calculating the data and analyzing it. In Qualitative data, a study of content analysis by going through various sources and then after analyzing it can be drafted comprehensively for people to study it.
7. **Data Interpretation** After analyzing and studying the data carefully you need to extract the relevant information for which the data has been collected in the form of blogs, articles, research papers & thesis.
8. **Result and Generalization** After performing all the above procedures a result is drawn and categorized in a format easy for the people to interpret and analyse the information shared.

Benefits of Research in Education

As it is said Research is a weapon for teachers and students. It gives ample benefits to striking out doubts and gives a chance to teachers & students to discover new ways of teaching and help students learn better, understand and are easy for them to grasp.

Following are the benefits of research in education:

1. Help you find solutions to particular problems arising in school or college.
2. Underpin professional learning of knowledge, skills and understanding.
3. Connect to you with sources of information and network of professional support.
4. Clarify purpose, priority and process when introducing change like for ex- assessment, prodigy and curriculum.
5. Improve understanding of your professional and policy context, originally, locally and nationally enabling you to teach and lead more strategically and logically.

6. Develop your agency, influence, self- efficacy within your own school or college and more widely within the profession.

There are four main ways that research can contribute to programmes of teacher education:

1. The content of such programmes may be informed by research-based knowledge and scholarship, emanating from a range of academic disciplines and epistemological traditions.
2. Research can be used to inform the design and structure of teacher education programmes.
3. Teachers and teacher educators can be equipped to engage with and be discerning consumers of research.
4. Teachers and teacher educators may be equipped to conduct their own research, individually and collectively, to investigate the impact of particular interventions or to explore the positive and negative effects of educational practice.

Challenges in Research in Education

1. Research by Students

Gone were the days when students spent hours and hour's sitting in the library flipping pages to pages searching for the right content. Those were the days when Plagiarism was not so recognised and Copyright laws were not known to people. Technology being a boon to the society has cleared our path-holes and pitfalls in the path to a high level of research. Enhancement in technology has created a unique stream for Education like Online Platforms, has allowed students to do courses at a reasonable rate Online Exams like CAT, CLAT and more entrance are all online. Students are the future assets of our nation. Indian Education system which is more inclined to mugging things up and puking it on to their answer sheets. After the introduction of Value-based on questions in schools. It tests the reasoning ability of students regarding their appropriate Subjects. It's not just confined to answering the same definition which the teacher told them to write but it gives them a wider circumference to explain their understanding in a much better and concise way. It does not only test their understanding but develops a sense of learning the practical aspect as well.

Now-a-days youth are more aware of what courses to choose which job suits them and are not just confined to regular course books but in search of new opportunities which gives them a platform to perform in skilful jobs. In most Universities which make students go through industrial visits, mandatory internship's and the submission of their project based on what they learn during the internships help them in researching and help them flip another side of the coin. The concept of internship helps students to acknowledge the practical aspect of the subject which is useful for their overall development. Some publications publish their annual Journals which gives students a platform to show their analytical skills. Specialised courses like PhD in Humanities, Science, Law, and Medical, Arts etc. helping young graduates to approach and making it easy to look out for jobs in Educational Institutions.

2. Research by Teachers and Scholars

Teaching is not just confined to Blackboard and a snippet Chalk. The Research Phenomenon of teaching in the field of education which not only helps young Teachers and College Professors in their respective fields but also gives a new incite to teaching methods. The impact of Research on teaching will leave a long term impression on the students and a teacher should always be open to new ideas. Research is a weapon which can be used by teachers to inculcate students on the bright side of its teaching. If research is open to new fields and existing fields it gives ways for new ideas to reach to the public. In today's generation students are very active when it comes down to how much subject knowledge a teacher has whether it is the current topic which you are teaching or any topic relating to it. Students can ask any questions or queries on or off the topic so to be well versed with the topic Research is that key which unlocks all such barriers. A proper methodology and correct sense of knowledge will fill such loopholes. Research is not just confined to teaching it involves a whole division of other aspects such as how to deal with weak students to cope up with you, the psychology

of students, personality traits and how to manage it side by side. They know every aspect of your teaching.

Conclusion

By this paper, we can conclude by saying research is a catalyst in the chemical reaction of education which helps in a rapid flow of education to run smoothly and make it easy for it to flow. Research in education helps not only bring advancements in education but it also gives a clear and thorough analysis of any particular subject. It helps to solve problems scientifically and methodically. It is a systematic effort to acquire new knowledge in all streams. The Inquiry aims to shape debate, inform policy and influence practice by investigating the contribution of research in teacher education and examining the potential benefits of research-based skills and knowledge for improving school performance and student outcomes.

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