

# **Role of Research and Innovation in Teaching, Pedagogy and Professional Development**

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**Abstract:** *Research activities which aims at evolving something unique which is good for it's application. This is also applicable for education and we all know that teaching is very vital part of education systems. We all know that the prime purpose of teaching should be to make our learners as independent self learners and equip them with higher cognitive abilities along with affective domains and psychomotor skins and therefore, our future resources and innovation should evolve such pedagogic methods/ strategic which would serve this purpose.*

**Keywords:** Research, Innovation, Pedagogy, Professional Development etc

## **I. RESEACRH AND INNOVATION IN PEDAGOGY**

Meaning of research: It is a process of knowing something un known which is known to many as well as more and more about less and less.

Importance of research: it is taken in many disciplines but it needs to be scientific activity which is also a systematic process. It needs to follow certain steps. The various types of researches are undertaken and methodology of it would depend upon the objectivities of research stud. The basic purpose of any research is that through its findings, new theory/ principal always would be evolved some researchers have such findings which can be generalized and it happen in many researches of natural scientific and technology but there are some researches in social science and especially in education which have their own delimitation. Some survey studies are undertaken to explore the present situation in that area e.g. studies on enrolment of students(boys and girls) in a particular area. Some experimental studies are undertaken to validate a learning material in a particular subject or any specific teaching methods and validity of it can be proved.

### **Meaning and importance of pedagogy:**

It refers to art and science of teaching but it cannot be defined as easily as it seems. According to chapusis(2003), pedagogy is essentially a combination of knowledge and skills required for effective teaching. Watkins and Mortimer (1994) believed that pedagogy refers to all those activities which are designed consciously to educate other people Alexander(2003) believes that pedagogy is not only the practice of teaching but it also included the skills which a teacher should use in order to make various different decisions related to his/her professional life. Leach and Moon (1994 explained pedagogy as a joint efforts activity. When one looks at above definitions, one would come to a conclusion that when teaching is a profession, it is a scientific activity and hence mere content mastery on part of a teacher is not enough but he/she needs to have sound knowledge about various methods/ approaches/ techniques which one would adopt for teaching. This is because teaching is not merely a goalless activity which is to be transferred to the learners and for this only knowledge in that particular subject/ discipline is not sufficient but it should be transferred in such a way that it would effectively reach to learners. Not only is this but a teacher supposed to develop some higher cognitive abilities like critical thinking creativity innovations deep understanding of a particular aspect. He/he should be value inculcator too. While teaching, he/she should be able to sustain interests of learners as that is one of the major problems which is a faced in the modern world due to several reasons. One of them is that students have different sources of acquiring information like interest (gift of modern technology). However, getting information even it is a large fund is not enough but they (learners) should be knowledgeable in a real sense which means that they should get

some, higher cognitive abilities. For this, a teacher is supposed to make his/her teaching very live and joyful. It would attract students for classroom teaching and this is not possible if a teacher would use age old” Teacher centred methods” wherein a teacher would use lecture method. A teacher needs to make use of student of student centered method. Teacher should always keeps in mind that his/her take is meant for a group of learners and that is why it should not be taken rightly or carelessly. Teacher should develop such ability on part of learners that they are motivate to know further which means that research ability or creativity or critical thinking or inquiry spirit should be developed. Modern teacher must ensure that students do exists in centre of learning as they are of prime importance for his/ her teaching activity.

#### **Future research and innovative activities:**

We need to ensure that our future research or innovate activities should be such that method/ techniques/ strategy approach of teaching is vital. This is because effective transfer of knowledge is not possible if proper methods/ techniques are not adopted. Moreover, if student centred methods are not adopted, we would not be able to retain attention of our students. As bloom’s taxonomy advocates, we need to develop cognitive affective domains as well as psychomotor skills of learners. Not only the but our teaching in classrooms should be such that it would develop higher level cognitive among learners. For this purpose, our age old methods would not suffice the purpose there is no harm if we make relevant use of modern educational technology.

We can teach our learners through computers, slides, mobiles etc. It would make our learning process as student centered and it would retain them too. They would feel more interested in classroom learning there is nothing wrong if we provide them self learning material. It would make them learners in true sense and interest as well s retention power of them would be enhanced. Their hunger to know more and more would increase and their research power would get developed. They would be ready to accept new challenges rather than showing and adopting any type of defense mechanism. Therefore, for our future researches and innovations should be such they keep an focus, our student centered methods of teaching such as project methods, assignment method, self learning through various educational technology gadgets and learning materials. We need to develop it for different standards as demands of each age groups are different and we must validate them through different experiments, before putting them for implementation or final use. We must keep in mind that prime need of hour is not to undertake those survey studies which would throw light on existing situation but those researches innovations need to be undertaken which would make them self sufficient learners in truer sense and creative and critical abilities of them would be developed.

#### **Role of research in teaching**

- Research helps lecturers to interrogate aspects of their teaching practices and evaluate learning processes with a greater understanding of its relevance to their careers. It helps in assessment of particular situations in order to conform to the practices required in the pedagogical field.
- As a result of this, teaching/learning process becomes enjoyable and meaningful and in addition, it enhances symbiotic relationships between and among both the lecturers and the students. In this case, there should not be strains and tension in the teaching/learning process.
- Research can contribute to effective teaching in following ways-
- Research can be used to develop the design and for making the structure/plan of teaching.
- It also provides guidelines for selection of appropriate use of teaching techniques and strategies according to the content.
- It provides proper direction and resources which is useful for effective teaching- learning process.
- It provides answers to practical educational challenges using scientific methods. ... Educational research improves teaching and learning methods by empowering you with data to help you teach and lead more strategically and effectively. Educational research helps students apply their knowledge to practical situations.
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- Help us find solutions to particular problems arising in our classroom teaching or in a school environment.

### **Role of research in professional development**

Research can help improve the teacher's self-esteem. Documented action research can be one source of solving problem. It also helps develop the teacher's repertoire. Finally, the teacher can use action research he or she has done to help others whenever they have difficulties.

Research (as a process of knowledge building) inspires personal growth and development in individuals and groups. Teachers bring their expertise to their classroom and by actively sharing the knowledge they have gained through research, they build a professional community and shape the minds within that community.

### **Research can contribute to professional development with following ways-**

- Doing action research helps teachers to grow professionally, and to show how they are extending their own professional knowledge.
- In addition to this, teachers can identify the criteria, or standards, that they and others are using to judge the quality of what they are doing.
- Teachers will become better at what they do by conducting research and that the quality of learning for their pupils will be higher.
- It has also been asserted that teacher research will stimulate positive changes in the culture and productivity of schools and raise the status of the occupation of teaching in the society.
- Research promotes teacher's ingenuity, creativity, critical thinking, decision making ability and flexibility to respond to changing conditions.
- Through research Teachers can acquire professional judgment, develop their own personal theories and broaden their roles and actions.
- In addition, the use of research strategies has a great impact on their classroom practices; the knowledge gain through research is useful to deal with a difficult situation in their personal teaching experience and practice.
- Research is helpful for the acquisition of professional identity to the teachers.

## **II. CONCLUSION**

Research (as a process of knowledge building) inspires personal growth and development in individuals and groups. Teachers bring their expertise to their classroom and by actively sharing the knowledge they have gained through research, they build a professional community and shape the minds within that community

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