

## Educational Research: A long way to go....

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### Abstract

In today's era of evidence based medicine recent advances in medicine have been understood & adopted by all the disciplines of health sciences but the same is not true for the methods & strategies in medical education. Quality medical education provides quality improvement in healthcare & for quality medical education evidence has to be created by undertaking educational research. Research in Medical Education may apply quantitative, qualitative or a mixed methods approach. These approaches may lead to the development of new theories or practices in Medical Education; design, implementation and evaluation of educational interventions; and systematic reviews and meta-analyses on selected topics. All such studies are expected to advance the field of Medical Education. Being one of the effective tools for educational system improvement, educational technology plays an important role in learning facilitation. In order to have a deeper, more effective and long lasting impact, this systematic approach designs, implements and evaluates the teaching learning process, using specific purposes, new methods of psychology and communication sciences and also human and non-human resources. Medical Education Units are supposed to carry out many activities to strengthen the quality of medical education, one of which is to carry out research in medical education. The research could be in the form of inquiry driven strategies in various aspects of medical education. Though a good number of teachers have completed the necessary workshops, educational research projects taken up and publications are very minimal. Lack of motivation about educational research among teachers in general and among educators and lack of recognition or rewards for work done are the main issues that needs attention.

**Keywords:** Educational Research, Evidence, Medical Education Units Education Technology.

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### Introduction

India is a country with highest number of medical colleges in the world producing highest number of health care professionals. The quality of healthcare to a large extent depends upon the quality of training and education of medical graduates in these institutes.

Today we are living in an era of Evidence based medicine. Evidence-based medicine (EBM) is an approach to medical practice intended towards decision-making by the use of evidence from well designed and conducted research. In today's era of evidence based medicine recent advances in medicine have been understood & adopted by all the disciplines of health sciences but the same is not true for the methods & strategies in medical education.

Research in medical education began just three decades ago in New York. Though it is rapidly expanding all over the world with India being no exception, we are still in a stage of infancy.

Quality medical education provides quality improvement in healthcare & for quality medical education evidence has to be created by undertaking educational research. Since last few years there is a cry

to improve health care and a call for accountability and for that:

- Evidence has to be created by undertaking educational research for quality medical education
- Quality medical education provides quality improvement in healthcare

In order to improve the quality of medical education the concept of medical education units in all the medical colleges came up.

WHO has played a key role in the establishment of medical education units. The earliest medical education units established in the USA were offices for research in the field. In contemporary medical education and research, the role of a medical education unit (MEU) is varied, from research and teaching to nurturing a fulfilling career. The need to concentrate on one of these roles of a MEU may vary in different colleges. Some of the important attributes of a medical education unit (Davis et al., 2005)<sup>(1)</sup> are as follows;

- The MEU should be able to create a culture of educational research.
- It should be able to keep the faculty aware of the ongoing research in the field
- It should be able to generate publications and resources in medical education
- A medical education unit essentially needs to concentrate on the teaching learning needs of the students and hence facilitate the same
- It should provide instructional design
- It should focus on newer learning technologies such as simulation and e-learning

- It should develop guidelines for student evaluation and curriculum development
- It should provide on the job training or formal courses for teachers.<sup>(2)</sup>

In 1999 Medical Council of India (MCI) took a step in this direction and issued a directive for every medical college to have a Medical Education Unit (MEU). MEU has number of functions to perform one of its being to create a culture of educational research, to keep the faculty aware of the ongoing research in the field & it should also be able to generate publications in this area.

A MEU can provide a forum for learning the principles of ethics and professionalism in clinical practice and in research and support the teachers to understand the relevance of research in the field of education and the skills of scientific writing. In addition to training medical teachers in teaching, a medical education unit should be able to consider innovations in curriculum design, assessment methods and newer advances in technology and their application to medical education and establish research and scholarship in the field<sup>(2)</sup>.

The study of Medical Education covers a range of topics related to learning, teaching, assessment and leadership within the context of training and education of medical professionals. Some of the main foci in the field are: quality of teaching and learning, learners experiences, assessment and evaluation, standard setting, curriculum development, ethics and professionalism in medical education, continuing education, clinical and/or educational supervision, simulation, clinical competency, student selection, collaborative learning, psychological and cultural issues in medical education, the use of information technology and multimedia in medical education and related topics<sup>(3)</sup>.

Research in Medical Education may apply quantitative, qualitative or a mixed methods approach. These approaches may lead to the development of new theories or practices in Medical Education; design, implementation and evaluation of educational interventions; and systematic reviews and meta analyses on selected topics. All such studies are expected to advance the field of Medical Education<sup>(3)</sup>.

Medical education is a continuous process. Like in other fields there is an exponential growth of knowledge of the human body, its structure and functions as well as rapid development in the sophisticated techniques in many application fields. These issues can be addressed by the advances in education technology. But today there is lack of scientific founded comparative studies on educational developments in medicine. There is a call for higher quality and consensus on basic terms and conditions on medical education research. The Best Evidence Medical education (BEME) collaboration involves individuals, universities and organizations committed to promote

evidence based education in medicine and its goals are to produce systematic reviews of medical education research studies, to disseminate information worldwide to all stakeholders and to create a culture of best evidence medical education. There is a need to move from opinion-based education to evidence-based education. Best evidence medical education (BEME) is the implementation, by teachers in their practice, of methods and approaches to education based on the best evidence available<sup>(4)</sup>.

Being one of the effective tools for educational system improvement, educational technology plays an important role in learning facilitation. In order to have a deeper, more effective and long lasting impact, this systematic approach designs, implements and evaluates the teaching learning process, using specific purposes, new methods of psychology and communication sciences and also human and non-human resources<sup>(5)</sup>.

A fruitful and effective educational system which results in actual learning improvement cannot be achieved unless its faculty members become competent. To achieve this goal the faculty must attain and /or maintain academic qualification in their teaching area, but also be familiar with the newest communication and teaching methods and be equipped with educational and professional skills<sup>(6)</sup>.

In 1997, the Medical Council of India (MCI) recommended the establishment of medical education units (MEU) in each medical college<sup>(7)</sup>. Further, the requirement of MEU was included in the minimum standard requirements of an annual intake of 100 students in a medical college<sup>(8)</sup>. The MEUs are expected to organize FDPs, carry out research in medical education and promote continuing medical education (CME) programmes besides other activities<sup>(9)</sup>.

MCI New Delhi felt that the curriculum can only be successfully implemented through appropriately oriented and properly equipped teachers. And in accordance with this thought MCI recommended setting up of medical education units in medical colleges in 1981 (curriculum of graduates) and 1992 (Need based revised curriculum for graduates) which was further endorsed in 1996<sup>(10)</sup>. These MEU s are supposed to carry out many activities to strengthen the quality of medical education, one of which is to carry out research in medical education<sup>(11)</sup>. The research could be in the form of inquiry driven strategies in various aspects of medical education<sup>(12)</sup>.

MCI and MUHS have made 3 days basic course in education technology mandatory for all the health sciences teachers. Accordingly a good number of teachers have completed it. But a fellowship or advanced course in education technology have been perceived by marginal teachers.

During both these workshops teachers are made aware of many new concepts in teaching learning process whether it be process, media, assessment and evaluation with a perception that teachers will

incorporate them in their teaching. In addition if the faculty convert these innovative practices into research publications evidence will be created in the field of education technology.

One of the study on Impact and Effectiveness of basic workshop has quoted that after attending workshop there was a definite rise in the educational research projects by the teaching staff<sup>(13)</sup>. This could be because of the properly functioning MEU of the institute.

But the study was limited to only one medical college.

In fellowships and advanced courses educational projects are undertaken by the teachers and mostly these are the ones which are converted into publications.

It has found that though a good number of teachers have completed the necessary workshops, educational research projects taken up and publications are very minimal. When inquired, the major cause the teachers quoted was time crunch. In the recent past the regulatory authorities have reduced the staff requirement resulting into overburden of teaching and patient care on the existing staff. In addition the teachers have been allotted with lot of administrative responsibilities in the institutes. Academic publications are the need for every teacher for his /her promotions as per the requirement of regulatory bodies. So academic research and publications gets an upper hand. Naturally evidence in the field of medicine is created but this is not true for education technology.

The educational research in allied health science institutes was miniscule and the reasons were multiple, in many institutes the existence of MEU was itself nominal or if existent they were non-functional. So the motivational factor was missing. In few colleges the teachers reported very poor salary structure as a demotivating factor. Many MEU coordinators blamed it to apathy. A survey done in 2009 also reported that 1997 MCI regulations have led to increase in the number of MEUs. However there is a need to strengthen the infrastructure and faculty of MEUs, expand their area of operation and promote research in the field<sup>(9)</sup>.

Also a teacher of today has to perform multiple roles other than a teacher. He is much more than lecturer or teacher. He/she has to perform twelve roles to be more precise and one of them is he has to be a researcher and he is also supposed to be a resource creator<sup>(14)</sup>.

Similarly the curriculum of all the universities is revised at regular intervals. The research carried out in education technology may help in curricular revision.

### Road blocks

Lack of motivation about educational research among teachers in general and among educators and

lack of recognition or rewards for work done are the main issues that needs attention.

### Challenges to promote educational research

1. There is an urgent need to think of giving incentives for educational research.
2. How to attract medical teachers for educational research?
3. Can we integrate faculty development programs with educational research?

### Conclusion

- Though education technology workshops are meant for the betterment of teaching learning process, awareness about the importance and possible areas of educational research needs to be emphasized during workshops.
- Mere attending workshops have not been able to generate interest about educational research in the teachers.
- There is an urgent need to motivate health science teachers for educational research to generate evidence.

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