Review Article

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S-T-T-R-Model: Novel Modality of Impactful Medical Teaching

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Abstract

Education is an important aspect of our lives. Education has 360 degree impact on everybody's life. It starts in-utero and ends with death. In short, no phase of human life is without education.

Medical education and training varies considerably across the world. Various teaching methodologies have been used in medical education, which is an active area of educational research. Educational excellence, along with clinical excellence, is increasingly being recognized and rewarded appropriately.

Keywords: Study, Research, Knowledge.

Introduction

Education is an important aspect of our lives. Education has 360 degree impact on everybody's life. It starts in-utero and ends with death. In short, no phase of human life is without education. Medical education is a one very important fraternity of it which has a great impact on health system.

Although it is difficult to identify the origin of medical education, authorities usually consider that it began with the ancient Greeks' method of rational inquiry, which introduced the practice of observation and reasoning regarding disease. Rational interpretation and discussion, it is theorized, led to teaching and thus to the formation of schools such as that at Cos, where the Greek physician Hippocrates is said to have taught in the 5th century BC and originated the oath that became a credo for practitioners through the ages.[1]

Medical education and training varies considerably across the world. Various teaching methodologies have been used in medical education, which is an active area of educational research.[2]

> "Teaching is a very noble profession that shapes the character, caliber and future of individual. If the people remember me as a good teacher that will be the biggest honor for me" Dr. APJ Kalam

In medical colleges, few medical teachers have received formal teaching education. Furthermore, it is not known if traditional faculty development formats are the optimal learning options given findings from existing studies document both positive and negative outcomes. There is a gap in research that explores how medical teachers learn to teach and also limited research regarding how medical teachers actually teach.[3]

In the past decade the principles of effective teaching for medical teachers have come of age. To earlier generations of doctors no training in specific teaching skills was provided. Teaching was a skill that you were expected to possess or acquire. Effective teaching techniques are now a requirement for doctors, as highlighted by the General Medical Council. Every doctor is expected to deliver teaching, whether to medical students, allied health professionals, or postgraduate doctors. Furthermore, there is an expectation to show formal training in teaching methods. A passionate teacher will be an asset to any medical department. This, coupled with the personal satisfaction of being an effective teacher, is the motivation to become a better medical educator.[4] A medical teacher has the social contract to train the best doctors possible and this good teaching should be nurtured, encouraged, cherished and rewarded.[5,6]

Medical Teaching

In all courses of education, special teaching qualification are required like Diploma of education, Master of Education etc or faculty development trainings are given in the start of job. But in Medical Teaching such type of things are not given prime importance while joining to medical college as a teacher either in pre, para or clinical subjects.

The role model for teaching in medical colleges is their teachers only. Though in medical fraternity there are various modalities of teaching are available like. (Table 1.1)

Table 1.1

Classroom teaching: - Chalk and Talk teaching - Use of Overhead projector - Use of Power point presentation - 3-D, 4-D videos	Cadaver laboratory-Anatomy (Human dissection), Pathology (Autopsy), Forensic Medicine and Toxicology (Postmortem)
Online lectures	Hands on training for various medical procedures
On hand trainings	Live demonstrations of various surgical procedures
Use of microscope for histology, histopathology, microbiology and parasitology.	Community visits and teaching.
Bed side clinics	Small group teaching in tutorials
Virtual classrooms	Objective structured clinical examinations (OSCEs)
Problem-based learning, team-based learning.	Objective structured Practical examinations (OSPEs)
CME/Workshop/Guest Lecture/Conferences.	Skill lab and simulators
Medical education journals/ Newsletters.	Virtual patient.

In all courses of education, special teaching qualification are required like Diploma of education, Master of Education etc or faculty development trainings are given in the start of job. But in Medical Teaching such type of things are not given prime importance while joining to medical college as a teacher either in pre, para or clinical subjects. The role model for teaching in medical colleges is their teachers only. Though in medical fraternity there are various modalities of teaching are available like (Table 1.1).

S-T-T-R Model

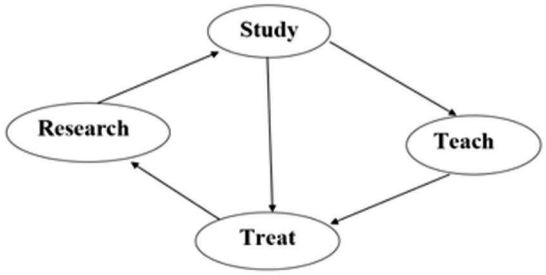

Fig. 1.1:

This model does not suggest any change in existing modality of teaching but there is small submission in preparedness and outcome of teaching (Fig 1.1).

This model involves four components like Study (S)-Teach (T)-Treat (T) and last but not the least is Research (R). All these four components are inter-related to each other.

Study

Teacher is always a student. He/She will be a lifelong learner. He should update/Revise his knowledge in the journey of teaching profession. Before going to teaching session, each medical teacher should do the study of topic in following way.

- **Basic**: He/She should study the all relevant basic literature related to teaching topic.
- **Latest**: updated information related to particular topic should be part of teaching session.

- **Revision**- This is very important aspect of teaching that in no matter how many times one has taken the same topic, he/she should revise that particular topic again.

Teach

Once teacher studies the topic to be discussed in class, then he will proceed with confidence and good level of knowledge to satisfy the knowledge hunger of students. This gives good feedback from students as well as satisfaction of teaching to teacher. What method of teaching he adapts is the secondary thing but knowledge of subject is of prime importance.

Treat

A medical Teacher, one who studies and teaches has to apply his knowledge for the benefit of community in the form of treatment of patients. But while treating the patients, Medical teacher should follow the medical ethics of-

- Transparency prescription
- No prescription i.e. counseling

Research

Research is the end product of medical education and teaching. The quality research comes only through study teaching and treating the patients. This is the actual experience of knowledge creation and application for the benefit of society, community and ultimately nation by fruitful research.

K-words in S-T-T-R Model

The main focus in this model is on (Fig 1.2):

- Knowledge hunger (Learning)
- Knowledge creation (Research)
- Knowledge dissemination (Teaching)
- Knowledge use for Treatment and Research

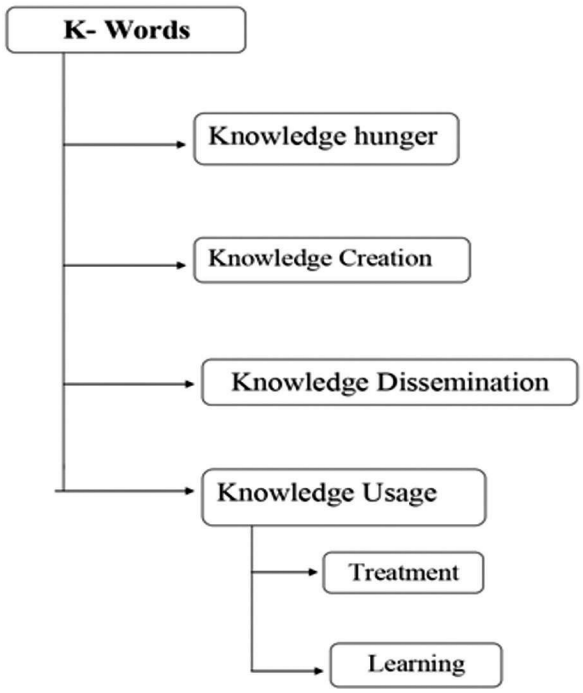

Fig 1.2

Conclusion

Educational excellence, along with clinical excellence, is increasingly being recognized and rewarded appropriately. However, we cannot rest on our laurels and must continue to strive to improve how we teach and to embrace new ways of delivering teaching, high quality healthcare and quality research.

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