# Incorporating the Scholarship of Teaching and Learning in Medical Education in India

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**Abstract**

*Purpose*: Medical teachers in India perform multiple duties which include clinical care, teaching-learning activities and research. While research publications are considered for recruitment and promotion, teaching-learning activities are hardly acknowledged. The purpose of presenting this perspective is to emphasize the importance and value of the scholarship of teaching and learning in medical education

*Methodology*: We describe the Scholarship of Teaching and Learning (SoTL), what exactly does it involve and its unique attributes such as deep reflection, committed engagement in action and making the work public for peer review. We also describe the importance of student involvement in SoTL work. We present some examples of SoTL work and ponder upon how this could be incorporated in medical education

*Results*: SoTL could be incorporated by sensitising all the stakeholders, creating an atmosphere in the medical colleges that is conducive to the development of such a scholarship, and rewarding it appropriately. Mechanisms to document SoTL work and assess it shall have to be developed.

*Conclusion*: Incorporating SoTL in medical education would give new meaning and purpose to a career in medical education. The quality of medical education would improve, benefitting the students, and ultimately the society.

*Keywords*: scholarship, teaching, learning, medical education, research

## Introduction- The current role of medical teachers in India

Medical teachers in India perform multiple roles. They do clinical work, teach and assess undergraduate and post-graduate students, perform various administrative duties and conduct research. There are various opportunities for the teachers to develop their knowledge and skills in these roles. While they participate in various academic programmes related to their discipline, there are a number of opportunities for development in medical education as well.

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These include the revised basic and advance courses in medical education and the fellowship of the Foundation for Advancement in International Medical Education and Research offered by the regional institutes in India (Zodpey *et al.*, 2016). A special course called the 'Basic Course in Biomedical Research' has been designed and made mandatory for all post-graduate students and teachers to enhance the skills of medical teachers and post-graduate students in research methodology (ICMR and NIE, 2019).

While medical teachers are expected to perform well in all these roles, not all of these are evaluated or considered for recruitment or promotion. It is only the scientific research publications that count. There are special marks attributed to publications for the purpose of recruitment and a certain number of publications are mandatory for medical teachers to be promoted (Bandewar *et al.*, 2017).

Although there are criteria to judge the value of such publications, the actual quality of the research and the role that the authors played in getting them published are not really looked into. Many a times, the research is published in the so-called predatory journals for a fee, and without any peer-review. And these journals often have misleading names that indicate an international publication (Bandewar *et al.*, 2017; Sharma & Verma, 2018). Also, some genuine research work done by faculty members fails to be appreciated because it does not fulfil the criteria laid by the National Medical Commission.

There are some teachers who dedicate substantial time and effort to their teaching-related activities. They plan lectures well, pay keen attention to how students learn, attend faculty development workshops and courses, and ensure they apply the new learning to practice. Such efforts are driven by intrinsic motivation alone. They may be appreciated by students and colleagues, but when it comes to recruitment or promotion criteria, these are not taken into consideration (Dhulkhed *et al.*, 2016). All the hard work is done in isolation and remains unacknowledged.

Patient care, research and teaching are closely intertwined functions of the medical teachers (Elmberger *et al.*, 2019). Clinical research guides patient care, and it is from the work related to patient care that a research question arises. Substantial work done in this manner leads to the growth of science which in turn guides practice. Education involves transmitting this scientific knowledge and skill to the next generation of students. It's definitely not an easy job, and is a science in itself that requires research and new developments (Dhulkhed *et al.*, 2016). The students not only need to know the facts and figures, but also develop skills of critical reasoning, problem solving, decision making; and ultimately of dealing with the patients in real life. The role of education can never be overemphasized. Rendering the best quality of medical education is the central aim of most of the medical colleges. Corresponding to this, we need to acknowledge and strengthen this role of the medical teachers. This can be done by developing and rewarding the Scholarship of Teaching and Learning (SoTL).

**What is SoTL?**

SoTL is about valuing the educational process as serious and genuine intellectual work. The idea was first introduced by Ernest Boyer, the President of the Carnegie foundation for advancement in teaching and learning, who felt the need to re-define the idea of what it meant to be a scholar, in order to acknowledge the diverse scholarly work that teachers engaged in. He described four distinct, yet overlapping functions of the teachers- the scholarship of discovery (finding new knowledge), integration (synthesizing various bits of knowledge), application (putting the knowledge into practice) and teaching (passing on the knowledge) (Boyer, 1990).

The work related to SoTL involves closely examining the teaching-learning process as if conducting an experiment, with active involvement and reflection (Rowland and Myatt, 2014). It starts with asking deliberate questions focused on student learning and making efforts to answer them in a systematic way. The answers are peer-reviewed, made public, critiqued and ultimately used for the betterment of the teaching-learning process - of the individual teacher, the department, institute, other institutes, and so on. This practice would improve the quality of higher education, thereby improving service and ultimately benefiting the society at large. This process is depicted in Figure1.

Nine attributes of SoTL have been described in a concept analysis by Mirhosseini *et al.* (2018). These include continuous deep reflection, committed engagement in action, shared publicly, critique-based, critical enquiry process, dynamic process, learning focused, disciplinary and context oriented. Thus, SoTL goes beyond excellent teaching and even scholarly teaching. Passion and commitment towards teaching, great skills at teaching and in-depth knowledge of the discipline and educational theories are only pre-requisites for SoTL.

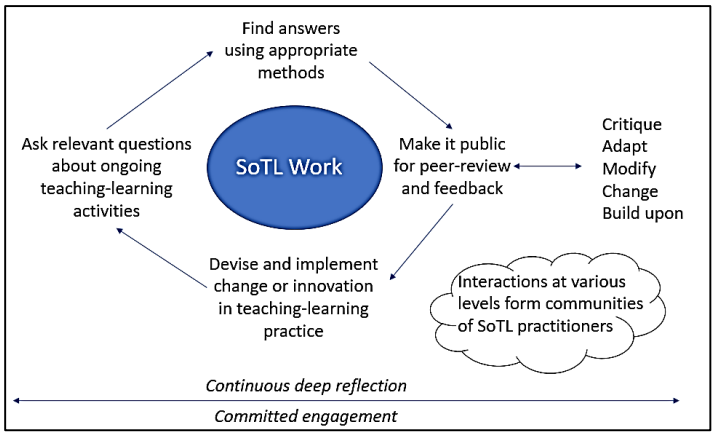


***Figure 1: The Scholarship of Teaching and Learning***

The process of SoTL involves evaluating what happens at the teaching-learning interface and how is the knowledge received by the students. The findings and the answers to such questions may not constitute numbers or statistical analysis as in the research methods. They may be subjective and qualitative in nature, but add immense value to the understanding of educational activities.

Lee Shulman in his book - 'Teaching as community property, putting an end to pedagogical solitude' emphasizes the importance of creating and being part of a community of scholars. He describes three ways of ensuring that teaching is valued as much as research in any particular discipline- considering the context of discipline in designing the teaching-learning activities, creating an artifact/resource/product out of the teaching-learning activities that can be made public, and rigorous peer-review (Shulman,1993). This creates a public platform of SoTL work for others to critique, adapt and build upon which in turn allows the development of communities of SoTL practitioners, who motivate and learn from each other.

Student involvement in SoTL work is considered crucial and not limited to inclusion in the inquiry or feedback process. It has been suggested that the results of relevant SoTL work must be shared with the students and their inputs be invited and valued to increase the impact of the work (McKinney, 2012). In fact, there is a recent trend in which students are involved in SoTL work as co-researchers, co-designers and co-learners. So, they are not just 'research participants' but partner with the teachers in SoTL work, along-side them, rather than on the opposite end. This creates a sense of shared responsibility and ownership in the students for their own learning and it changes the campus culture from hierarchy-based to partnership-based, which in turn, contributes to better student learning (Center for Engaged Learning, 2013). In a way, SoTL that was first described by Boyer (1990), developed as a philosophy, turned into a movement and is now developing as teaching-learning culture in higher education across the world.

*Incorporating SoTL in medical education- Why and how?*

The advantages of developing SoTL in medical education would be manifold. If recognised and rewarded, medical teachers would feel motivated to redirect their efforts to the betterment of teaching-learning activities rather than focusing only on completing everyday tasks and attending to the mandatory research requirements for promotions. Teaching-learning would be valued and its quality would improve, leading to improved learning outcomes and better quality of medical graduates. The students would not only receive the basic knowledge and skills pertaining to medical education, but also reasoning ability, critical thinking and reflection that is vital to medical practice (Schonn, 1987). This would, in turn, benefit the society. The students would be more satisfied and confident. Students who participate in SoTL work would feel more empowered and responsible for their learning. The whole atmosphere and culture in the institute would change, redirecting energy to the central task of educational activities.

*Role of medical teachers in incorporating SoTL*

Medical teachers need to move from excellent teaching to scholarly teaching and then to SoTL. A few medical teachers must move on to develop leadership and continue to mentor other scholars (Ramani *et al.*, 2020; Allen & Tanner, 2005; Allen & Field, 2005). The meaning of all these terms, which are sometimes used interchangeably, is described in Table 1. There is a lot of overlap in these terms, but the convergence is at the same point, where we appreciate and value educational activities.

***Table 1: The meaning of various terms related to teaching-learning activities***

| Term | Meaning |
|---|---|
| Excellent teaching | To prepare and teach very well in class |
| Scholarly teaching | To look for latest updates in the discipline as well as in educational methods to incorporate into teaching, and take feedback and comments from the students to improve teaching |
| Scholarship of teaching and learning | To ask questions related to the difficulties observed in one's own teaching-learning activities, seek answers to them and share them with peers, make them public, seeking to learn from others' experiences |
| Educational scholarship | To develop areas of interest in teaching-learning practice, conduct reviews, discuss with colleagues, conduct research studies and publish findings |
| Educational leadership | To lead educational programmes and initiatives and oversee and mentor the work of other educationists |

As the medical teachers move on to develop SoTL, they need to give shape and form to their academic efforts and document them meticulously. SoTL cannot happen in isolation, as a separate activity. It has to be embedded in ongoing routine work. Morahan and Fleetwood suggest a double helix model of activity and scholarship in building a medical education career. They suggest ways in which medical teachers with huge responsibilities of patient care or basic science education can convert their daily activities into practice-based scholarship. If the activity is teaching students, for e.g., they can teach others how to teach. If the activity is treating patients, they can teach various procedures to other clinicians. Then it needs to be documented and shared with others to build upon. It may not be in the form of a typical journal publication. It could be a medical column in a news-paper, a talk in a continuing medical education programme or even an educational workshop where documents are appropriately archived (Morahan & Fleetwood, 2008). Doing such scholarly activities hand in hand with routine work requires additional effort. It must be recognised and rewarded.

A few examples of SoTL work are depicted in Table 2. The first two are related to higher education in general and may relate to all the disciplines, while the next two are specific to medical education.

We see through these examples how SoTL work involves reflection at all stages and how by doing it one can develop deep insights about teaching-learning activities. We not only look at what works and what does not, but also how and why. Translating these insights to our practice can then give rise to more questions and deeper understanding. This ongoing process, with peer-review, feedback from students and colleagues and continuous reflection, can go a long way in improving the quality of medical education. It would create an understanding of the richness and complexity of educational work, and continue to enthuse teachers and improve students' learning and satisfaction.

*Role of medical institutes in incorporating SoTL*

Medical institutes would have to offer the infrastructure, opportunities and support required for SoTL to thrive. Fincher *et al.* have written guidelines on how to incorporate SoTL

in medical education, based on the work done by the Group on Educational Affairs of the Association of American Medical Colleges. They suggest that institutions must develop mechanisms to create opportunities for peer-review and evaluation of SoTL work, so that they are recognised and rewarded as legitimate scholarly activities. The organisational infrastructure must also support the development of scholarship (Fincher *et al.*, 2000).

They recommend that the 'frame approach' described by Bolman and Deal must be used to evaluate and strengthen institutional support for scholarship (Bolman and Deal, 1997). Four frames have been described. The first one is the structural frame involving the education leadership positions, various committees, library access, educational facilities and society journals. The second one is the human resource frame including for e.g. orientation programmes for medical education, faculty development workshops, fellowships and educational resources. The third one is the political frame that refers to the involvement and will of various stakeholders in the development of scholarship-selection process of key positions, educators in leadership positions and forming coalitions to influence decision making. The fourth frame is the symbolic one that includes the traditions, rituals and ceremonies that value scholarship, public documents and fora that acknowledge and build upon educational innovations.

***Table 2: Examples of SoTL work done by teachers***

| Author | The central question or problem | What was found | Implication |
|---|---|---|---|
| Bridget *et al.*, 2021 | While critical reflection has a significant role in higher education, is there a gap in instructors' and students' perception of it? | There were similarities and differences in the way instructors and students defined, engaged in, identified and valued critical reflection | While facilitating critical reflection remained a challenging task, both students and instructors valued the process and the gaps were not insurmountable |
| Jennifer *et al.*, 2021 | What are the emotional responses of students when they receive feedback? How do these emotions influence their learning habits and behaviours? | Diverse emotions, both negative (stress, shock, disappointment, anger) and positive (relief, excitement, pride) were felt by the students. They had an impact on their motivation to learn. | There is a need to appraise and support the emotional preparedness of students in receiving feedback, so that it helps in enhancing learning motivation, resilience and self-regulation. |
| Papanagnou *et al.*, 2016 | Would learning of intravenous catheter placement be better if the instructional style was matched with the individual student's preferred learning style? | There was no statistically significant difference in the learning outcomes of students in all the groups, taught by different instructional styles matching the students' learning style. | Matching instructional style to students' learning preference may not necessarily improve learning. Specific instructional style may be required for teaching procedures. |
| McCarthy *et al.*, 2020 | The patients treated in emergency department often had uncertain diagnosis. The service providers were not comfortable and trained in communicating this diagnostic uncertainty to the patients | A simulation based 'Uncertainty Communication Education Module' was developed and implemented. | Patients' understanding of the care that they received improves their satisfaction, care quality and safety; and this was achieved by implementing the module to address the training need. |

*Challenges and ways to overcome them*

Bringing about this change would not be devoid of challenges. It would require a change in attitude and practice of all the stakeholders. It would require more investment in terms of time, human resources, and central and institutional support. Faculty development activities would have to be taken up to empower them to take up various scholarly activities in teaching and learning.

One challenge would be for teachers to learn ways in which they conduct and document their SoTL work. One way to do this would be to develop and maintain portfolios. Tofade *et al.* have suggested a portfolio model based on the principles of continuous professional development to develop individual teacher's SoTL skills. The faculty portfolio they developed consisted of four sections - Reflect, Plan, Act and Evaluate. They conducted a workshop for the same and documented the faculty perceptions and feedback regarding the potential benefit of using such a portfolio. They reported that such a portfolio could be used for personal development in the area of teaching-learning, increasing the SoTL efforts by faculty, new faculty development, yearly faculty evaluation process, preceptor development and residency evaluations (Tofade *et al.*, 2014). Medical teachers would have to be sensitised and trained in the development and use of such portfolios.

The next challenge would be to assess the SoTL activities for taking high stake decisions such as recruitment or promotion. The activities related to the scholarship of discovery - the scientific research publications are relatively easy to document and evaluate. On the other hand, activities related to teaching and learning are more complex, diverse and need qualitative evaluation. It may be difficult to evaluate whether the work could be considered scholarly or not. The documents presented for evaluation may not be journal publications but educational resources developed and made available on web, work-sheets of an innovative workshop that was conducted, a textbook chapter etc.

Glassick (2000) has developed criteria on the basis of which such work can be evaluated and considered for scholarship. These are - clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique. A few other characteristics to evaluate scholarly work have been described, that state that it should be using the faculty member's expertise, innovative, public and archived for others to use and build upon, peer-reviewed and serving as a platform for creating an impact on the discipline or people in the community (Diamond & Adam, 2000; Hutchings & Shulman, 1999). The medical institutes would have to develop mechanisms by which such criteria described in the literature can be put to use in order to evaluate scholarly work.

Students would be at the receiving end of SoTL activities. Although they would be the ones benefitting a lot, it would also require a lot of active involvement, participation and reflective feedback from their side. They would have to be sensitised and motivated for whole-hearted participation and even partnership in these activities.

**Conclusion**

Teaching-learning has been considered a noble activity involving immense dedication and responsibility. Indeed, it is the heart of any centre of higher education. Developing and rewarding SoTL in medical education is just intuitive and needs no explanation or emphasis. It needs to be incorporated and deserves to be acknowledged; all the necessary efforts in this direction must be made. These include encouraging the medical teachers to shape and refine their academic work to build SoTL, and sensitising the stake-holders to devise a system to recognise, assess and reward their SoTL work. This would add new meaning to a career in medical education and improve its quality to a great extent.

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