**SoTL in Medical Education: Four Case Studies**

Chaoyan **DONG*, Yap Seng CHONG, Su Mei LEE, Matthew GWEE, Su Ping YEO and Dujeepa SAMARASEKERA**

Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore 119228

*Corresponding Author’s E-mail: meddc@nus.edu.sg

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**Extended Abstract**

**Introduction**

Given the increasing complexity of the healthcare delivery systems and new approaches to teaching and learning, medical teachers should have a thorough understanding of evidence-based principles in these areas. As the Yong Loo Lin School of Medicine (YLLSoM) evolves into an academic medical center, scholarship of teaching and learning (SoTL) has been greatly promoted. The Medical Education Unit (MEU) has been spearheading faculty development efforts in promoting SoTL at YLLSoM. We share four case studies from the Departments of Allied Health, Anatomy, Respiratory Medicine and Ophthalmology respectively. The four participants in the case studies have made extensive use of MEU services and resources, and sharing of their experience helps to identify the impact of faculty development programs as well as demonstrate their evolution from having limited knowledge in medical education to being a skillful SoTL scholar. The following results were based on data from individual interviews and students’ feedback to their teaching. Data analysis within individual case was guided by the grounded theory (Yin, 1984).

**Case Study 1**

**Prior to Working with MEU**

The participant engages in both laboratory and lecture teaching. For the former, the participant’s usual practice is to place the onus on the students to inform him when they feel confident to take the assessment. The participant will assess one student at a time (around 4 per session), while the remaining three stay behind to provide peer support, unlike many other courses where a large group is assessed at the end of the semester. While it is extremely time-consuming, students learn and retain the skills better.

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**Working with MEU**

1. The participant attended a few workshops like the SoTL, which taught him how to convert what he has been doing into scholarly work to be shared with the wider community.

2. The participant modelled his assessment forms after the sample forms provided (e.g. Mini-CEX forms) during the workshops. Previously, it was just verbal debriefings/feedback. These forms are useful for formative assessment, specifically the feedback conveyed to students during the clinical attachments.

**Changes in Learning Outcomes**

Attending these workshops and learning about Kirkpatrick’s model on educational outcomes, for example, have given the participant the assurance that his teaching and assessment methods are appropriate.

**Students’ Responses**

Students were appreciative that their skills were assessed in this manner and that they were given the opportunity to take the lead.

**Case Study 2**

**Prior to Working with MEU**

Participant’s teaching methods were not as interactive and he was used to imparting knowledge to the students directly.

**Working with MEU**

He attended several MEU workshops related to teaching and assessment methods.

**Changes in Teaching**

1. The participant developed question-based learning strategies for his classes. Tutorials are conducted mainly with questions (ranging from specific to general) in order to stimulate students’ thinking, rather than direct content delivery.

2. The participant also took the importance of assessment into consideration and introduced pre- and post-tests during tutorials.

3. The participant incorporated more clinical elements into the tutorials so that students could relate the anatomy content to clinical practices.

**Students’ Responses**

1. Students were more engaged and involved during tutorials; they also performed better towards the end of the semester.

2. The tutorials filled the knowledge gaps between the lectures and clinical practice.

3. All students turned up for the tutorials, except for the few who were ill.
Case Study 3

Prior to Working with MEU

The participant is involved in small group bedside teaching in the content speciality. The participant could not fully appreciate the structure of the entire medical curriculum, and often wondered if the teaching was coherent with what was laid out.

Working with MEU

Through the workshops, the participant understood the importance of knowing the overall curriculum. Thereafter, the participant made enquiries with his department to obtain additional information regarding this.

Changes in Learning Outcomes

The participant revised the teaching methods to better cater to the needs of Year 3 and 5 medical students. For the Year 3s, the participant now places more emphasis on bedside teaching for them to gain more hands-on experience. As the lessons for Year 5s are held near to their final exams, the focus is on lectures to help them prepare for the exams.

Changes in Teaching

1. The participant learned to identify more appropriate cases which cater to the students’ needs when conducting Mini-CEX.
2. The participant will make the effort to sit down with the students and engage in useful verbal feedback.

Case Study 4

Prior to Working with MEU

Participant does not have a structured methodology as to how to teach. Time constraint is also a major challenge.

Working with MEU

1. The participant attended various workshops.
2. The participant learnt various ways of teaching. Some of the teaching methodologies are structured and organised that can be used to improve teaching.
3. With an effective method of teaching, the participant does not have to repeat the lectures and could afford to spend more time answering students’ questions and making sure that they learn effectively.

Changes in Teaching

1. The participant just received an education grant to develop the online module so that it becomes less labour-intensive and can allow students to do it interactively.
2. He became more mindful in ensuring that what he teaches is in accordance with the Entrustable Professional Activities, which define responsibilities trainees should perform without supervision.
3. He uses the Pendleton model to give students feedback and taught the whole department to conduct a proper feedback session.

**Changes in Learning Outcomes**

1. It is not just about learning content. The students also learned how to think as a clinician, to behave as a clinician as well as cultivate their bedside manners and communication skills.

2. His online modules were useful in preparing students for the actual MBBS exam for ophthalmology section.

**Students’ Responses**

Students shared that the online modules and simulation sessions are very useful and helped prepare them for the exam. They wished there were more of such sessions.

**Conclusions**

Results from the four case studies showed that MEU has been instrumental in helping medical teachers progress from being a novice in teaching to a skillful educator. Due to the word limitation, details for the case studies cannot be fully shared. Hopefully the descriptive data provides snapshots of the SoTL journey these participants have embarked on.
Acknowledgement

We would like to thank all the participants for the case studies.

References


