



Multi-Dimensional Model of Cooperative Learning

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Introduction

This study was an attempt to apply a multi-dimensional model of cooperative learning to motivate students in five steps and increase their engagement in active classroom activities. However, it was conducted in face-to-face (F2F) contexts. We believe the findings are applicable in virtual and hybrid contexts.

Statement of the Problem

Student evaluation of a face-to-face modular credit course to design, conduct and evaluate workshops in a medical education master's degree program indicated that, despite using a variety of teaching methods, there was a lack of student engagement. This might be due to teacher-centeredness originated in the cultural beliefs that consider teachers as mentors and role-models who must be followed.

From idea generation to implementation

Since student development is one of the main functions of medical education departments, conducting an interactive workshop (F2F, virtual or hybrid) which actively engages all participants in the teaching and learning process should be considered as one of the student development strategies. It seems that involving the millennial learners in interactive engaging modules promotes

their competencies and communication skills; and, equip them with competencies required for the 21st century.

A multidimensional cooperative learning model was developed to engage the learners through the following steps:

Step1: Workshop participation as observers and assessors

Step2: Individual reflection and large group discussion

Step3: Workshop participation as facilitators

Step4: Workshop real practice: conducting a workshop in a real context

Step5: Replicated individual reflection and large group discussion

Step1: Workshop participation as observers and assessors

All the students had to observe a workshop entitled "Scholarship of teaching and learning in medical education" designed and conducted by faculty members. Furthermore, the students were assigned to assess the observed workshop on the basis of an assessment sheet.

Step2: Individual reflection and large group discussion

Two weeks later, the students were asked to attend a large group discussion session. Hereof,

an inclusive environment was created to provide opportunities for all students to reflect on their experiences individually and to discuss their opinions in a large group discussion.

Step 3: Workshop participation as facilitators

Afterwards, the students had to attend a workshop on Qualitative Research Methods in Medical Education (QRM-ME) as facilitators. Subsequently, the students attended three coordination sessions supervised by the workshop instructor. Eventually, the QRM-ME workshop was conducted to encourage learning by doing in the students as facilitators.

Step 4: Workshop practice: Conducting a workshop in the real context

Then, the students were asked to design and develop a workshop on their own. At this stage, the students conducted a workshop on “active learning”.

Step 5: Replicated individual reflection and large group discussion

At the final session of the course, all participants were asked to reflect on their lived experiences of this multidimensional cooperative learning model to increase individual insight and share experiences with peers and course supervisors.

Conclusion

This course was designed on the basis of the

principles of active learning including student engagement in regular reflection, self-assessment, and knowledge acquisition by participation or contribution in an activity (1, 2). Additionally, based on the students’ reflections, their active participation in all phases of the study has attracted them, and not only encouraged them to participate more actively, but also increased their satisfaction.

Finally, the approach is suggested for F-to-F, virtual and hybrid classrooms to facilitate teaching and to promote student engagement and active learning.

Authors’ Contribution

All authors contributed to the discussion, read and approved the manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated resolved.

Conflicts of Interest

The authors declare no conflicts of interest.

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