

## **Combining team-based learning to eLearning in medical education**

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### **What problems were addressed?**

Team-based learning (TBL) is a modern teaching method that provides positive learning experience for students and receives positive reviews from teachers<sup>1</sup>. It requires advanced pre-class preparation for the instructor. Even though scratch-off answer sheets are used for the readiness assurance test (RAT), nowadays electronic audience response systems tend to replace the paper ones. Both of them require special knowledge from the instructor, administrative support and the appropriate funding.

### **What was tried?**

We applied TBL in two of ten 2-hour sessions in a public health course for 3<sup>rd</sup> year medical students. The average class size was 35 students, with five teams of 7 students in each. We sent email to students' personal address one week before their session. In that email we informed them about the instructional method, the topic that we would cover and the need to study the attached educational material in advance. We prepared five MCQs for the RAT (individual and team test), that was delivered at the beginning of each session in a paper format. The correct answers for each question were presented in a power point presentation for the intergroup discussion. Students' critical thinking skills were developed in the last part of the TBL session with module activities that promoted both deep thinking and engaged content-focused discussion.

Students evaluated positively the TBL sessions. The key themes that emerged from the thematic analysis of their comments were "the interactivity" and "the good relation between theory and practice". Moreover, we were asked to discuss about our experience in a personal interview by an external evaluator. We both agree that students' involvement in the class made the time of teaching more enjoyable. However, we reported that medical students were not well informed about the TBL and most of them were not prepared in advance for the RAT. The main reasons for that were that they didn't understand that this step was important. There were also many students who mentioned problems with emails (didn't check them regularly, didn't read them or didn't receive them at all). In relation to the application of RAT we noted that the need to create copies of the questionnaires was time consuming due to lack of administrative support.

### **What lessons were learned?**

Having previous experience in eLearning modules we agreed that eLearning could solve many of the issues that our TBL revealed. The involvement of all students in an eLearning environment where all learning resources will be timely posting could overcome many problems. Sending reminding messages via eLearning is extremely simple. Besides, eLearning can support TBL sessions as well. Nowadays all students have smartphones or tablets. Free Wi-Fi access in university

campus enables completion of both the individual and the team RAT online without the need to use paper forms. Immediate scoring and feedback is an additional asset of eLearning. Furthermore, the material needed

for module team activities can also be posted to eLearning. In conclusion, eLearning can facilitate teaching in TBL classes, overcoming many obstacles of the traditional method.

### REFERENCES

1. Burgess AW, McGregor DM, Mellis CM. Applying established guidelines to team-based learning programs in medical schools: a systematic review. *Acad Med* 2014; **89**(4):678-88.



*Team-based learning in a public health course for 3rd year medical students.*