



The enhancement of active learning in anatomy class using mix model for active learning: flipped class room and gamification

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Overview

The study of Anatomy is not easily to remember and understanding. Moreover this subject is boring and not interesting for the students. There are a lot of things to remembers, identify and understand. There are many types of active learning that I have used, for example flipped classroom and team based learning. But some of them are still don't understand and cannot identify the structure, because they did not participate in that activities. Therefore, in the anatomy of lower extremities lesson's summary class, I have used gamification for enhanced participation from the students and helped the student for better understanding, remembering, and identifying.

Objective

To enhanced participation from the students and helped the student for better understanding, remembering, and identifying.

Methods and Class Activities

1. The study material and the guidelines for lower extremities laboratory's review were uploaded for the student in modules before class for a week. Sixty nine students were divided into 5 groups, for each topics of lesson summary.
2. Each students sent the VDO clip for lesson summary, 2 days before class. Teacher see all of VDO and sent feedback to the student.
3. Pretest before start with Kahoot
4. Teachers opened the best VDO selected in each topic.
5. The group of student was rearrange and divided into seven group.
6. The gamification has been used for challenge.
7. Posttest with google quiz (with feed back) after the end of activities.

Results

1. The score of pretest and posttest

Total score (10)	Mean \pm S.D. (69 students)
Pre-test	6.27 \pm 1.82
Post-test	8.43 \pm 1.28

2. Teacher and facilitators observation

Students behaviors	Activity activation
Participation	All of students
Interaction	yes
Team work	yes
Enjoyable	yes
Pleasure	yes

Impacts

1. This activities enhance the accomplish of teamwork
2. All of the students in the class pay attention and interaction.
3. The improvement of classroom atmosphere, the students were enjoyable and pleasurable.
4. The improvement of posttest with better score.

References

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2. Dichev, C., Dicheva, D. Gamifying education: what is known, what is believed and what remains uncertain: a critical review. *Int J Educ Technol High Educ* 14, 9 (2017). <https://doi.org/10.1186/s41239-017-0042-5>