

Active learning combine with lecture-based learning

In the topic of physiology of skeletal muscle



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Overview

The teaching method in physiology subject for the health science students is usually a lecture-based method because it is a large classroom with 150-300 students.

At the end of each topic, students had to take a practical laboratory, which found that students were unable to conclude and discuss core knowledge of that topic. Moreover, they are shy to ask questions to get an understanding of the whole content.

Active learning such as fruit salad activity may help the student to improve their problem because of the opportunity to share knowledge with each other^{1,2,3}.

Aims and objectives

To apply fruit salad activity as a part of physiology practice after finished the lecture.

To assess student complacency on fruit salad activity in the physiology practice.

Activities

The lecture class size is 120 students and the laboratory class size is 65 students. After finished the lecture-based learning on the topic of the physiology of skeletal muscle, students had to do laboratory practice. Moreover, they have received laboratory handbook via Moodle 1 week before class.

➤ The ice-breaking technique was conducted before the start of the class using Poll Everywhere application.

"How are you today?"

➤ Student were grouped according their students ID (n=5-6).

➤ The class activities were brief taking for 15 min to make clear,

1. What activities have to be done?

2. What are the experimental procedures?

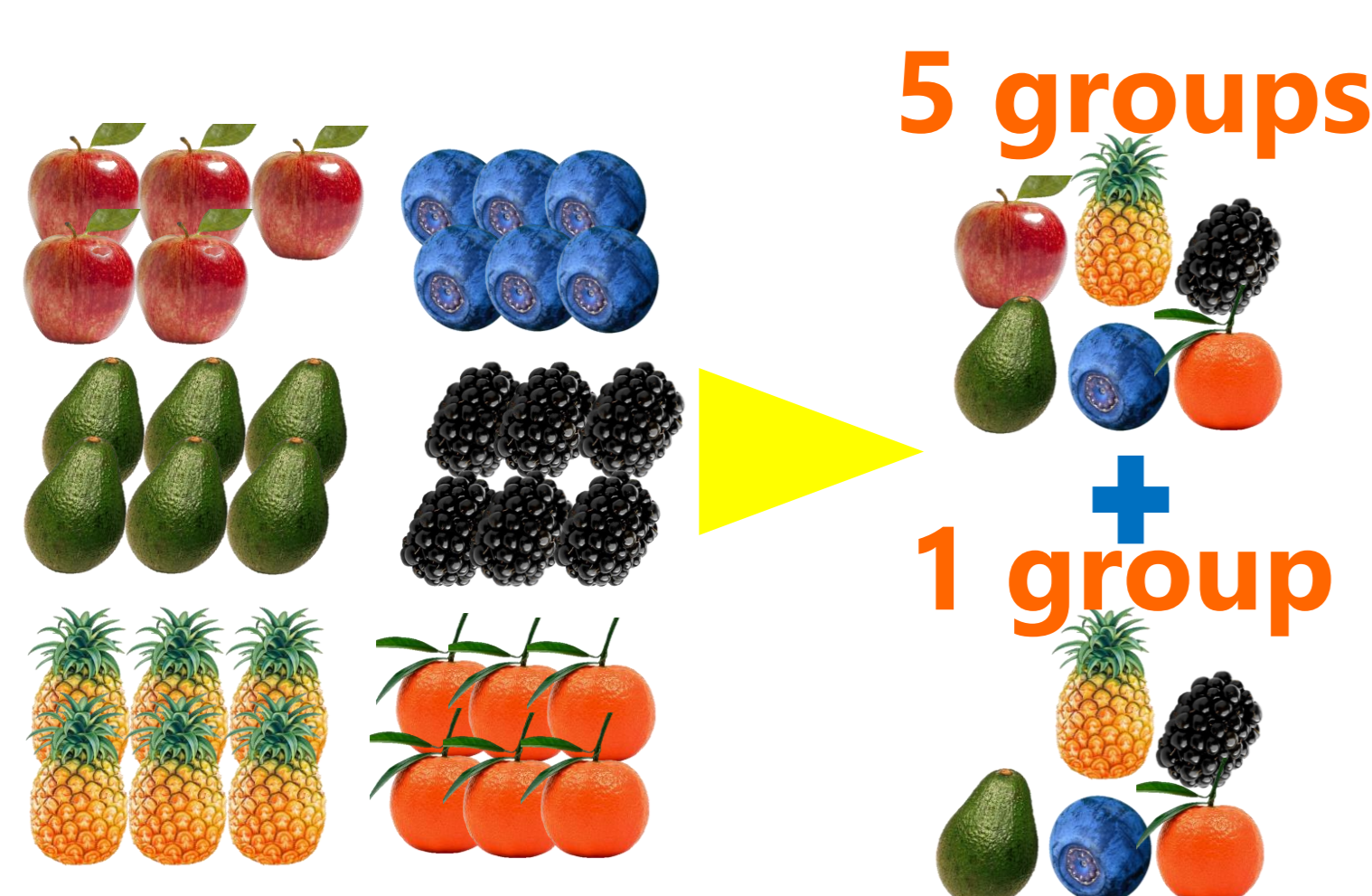
3. What basic knowledge is required?

4. What is the desired achievement?

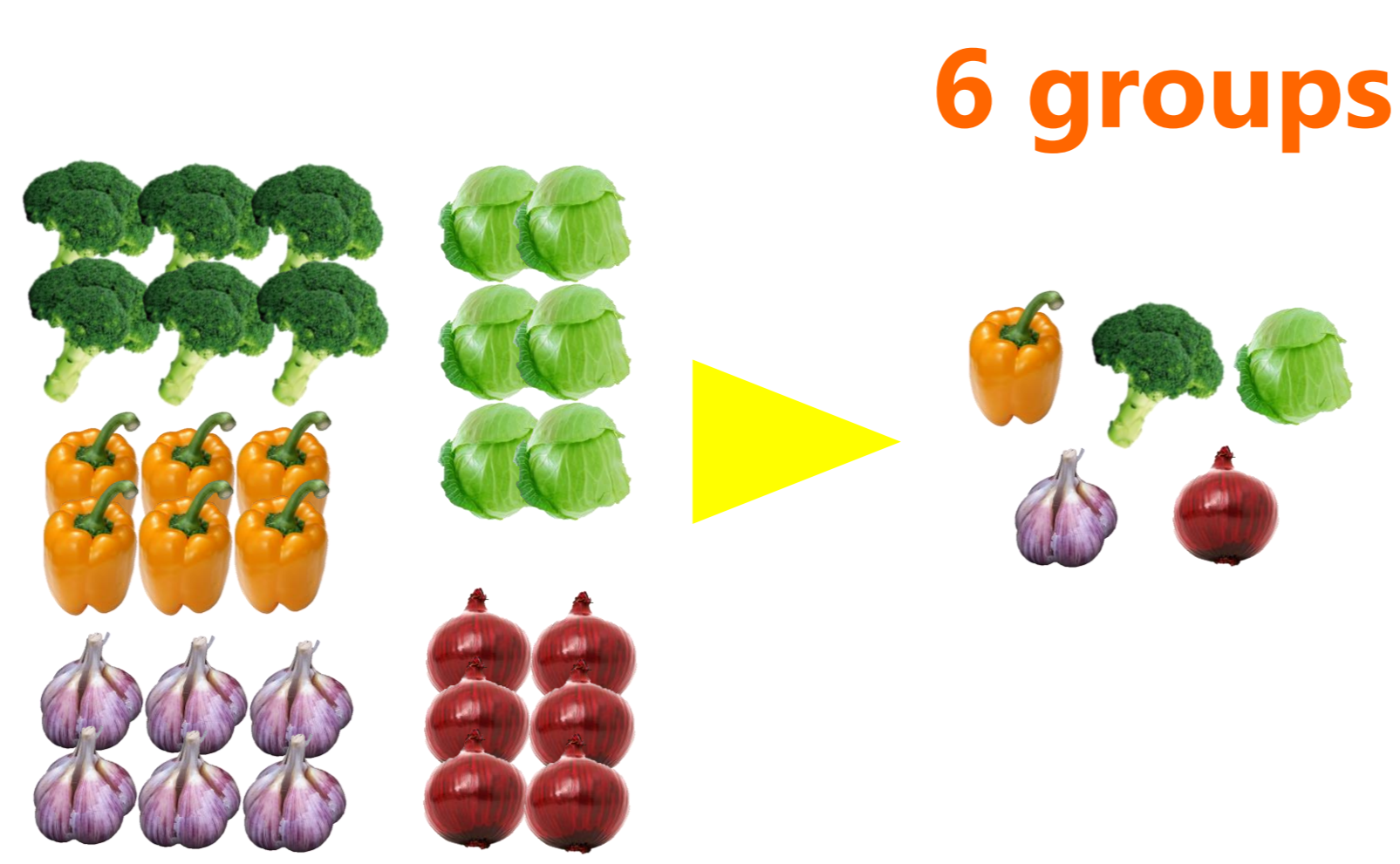
➤ Students were allowed to do lab by themselves for 2 hours under the supervision of lecturer and scientists.

➤ Fruit salad activity was applied for 30 min, students were allowed to make a new group with a member of other groups. In addition, vegetable salad activity, that is based on fruit salad activity, was parallely used. After that, students return to their original group and share the information with group members.

Fruit salad activity



Vegetable salad activity



➤ The lecturer summarizes the lesson both the lecture section and laboratory section for 15 min.

Evaluations

➤ Observation of student behavior in the classroom.

➤ Assessment the student complacency using Poll Everywhere application.

"What do you think about fruit and vegetable salad activity?"

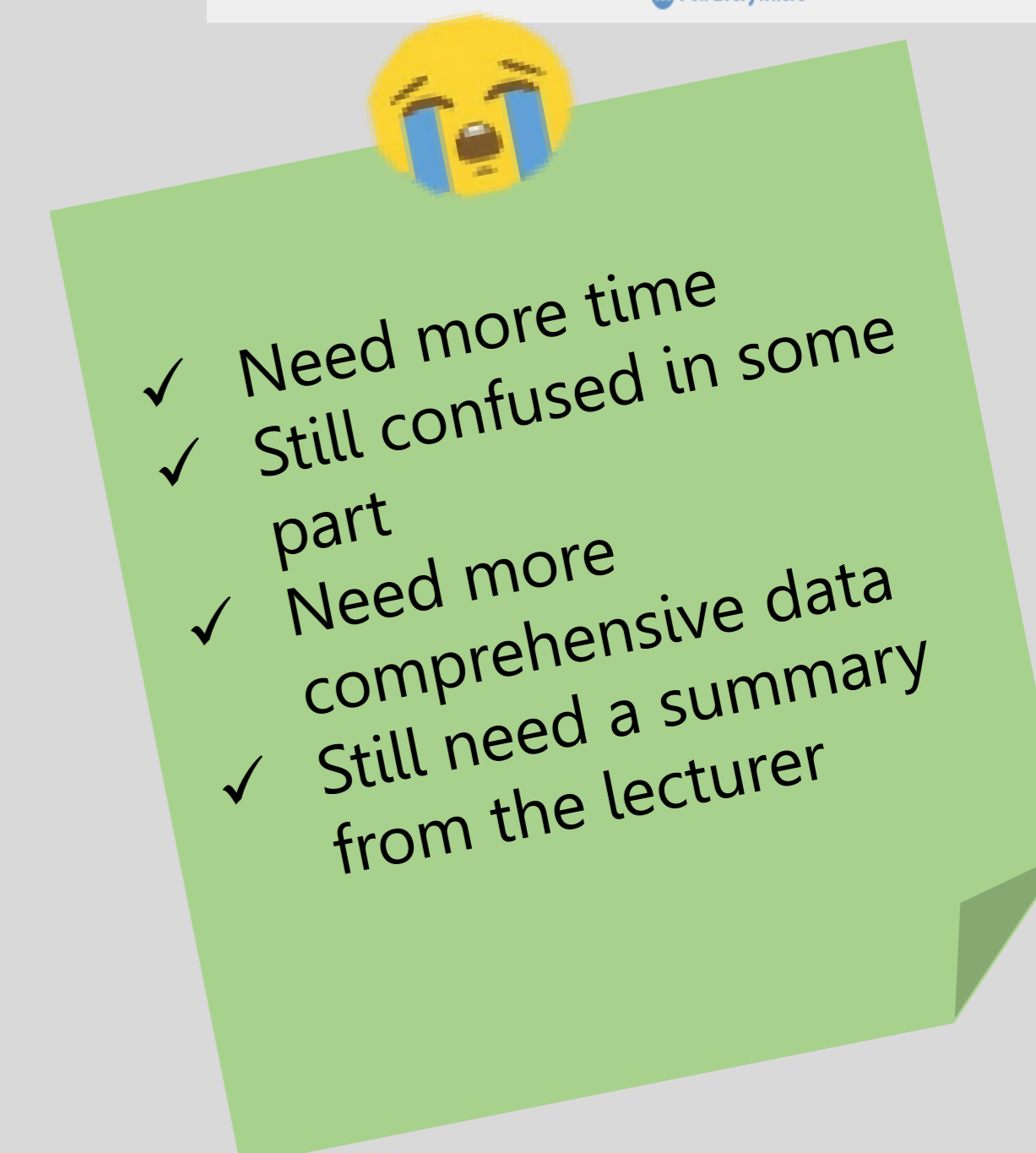
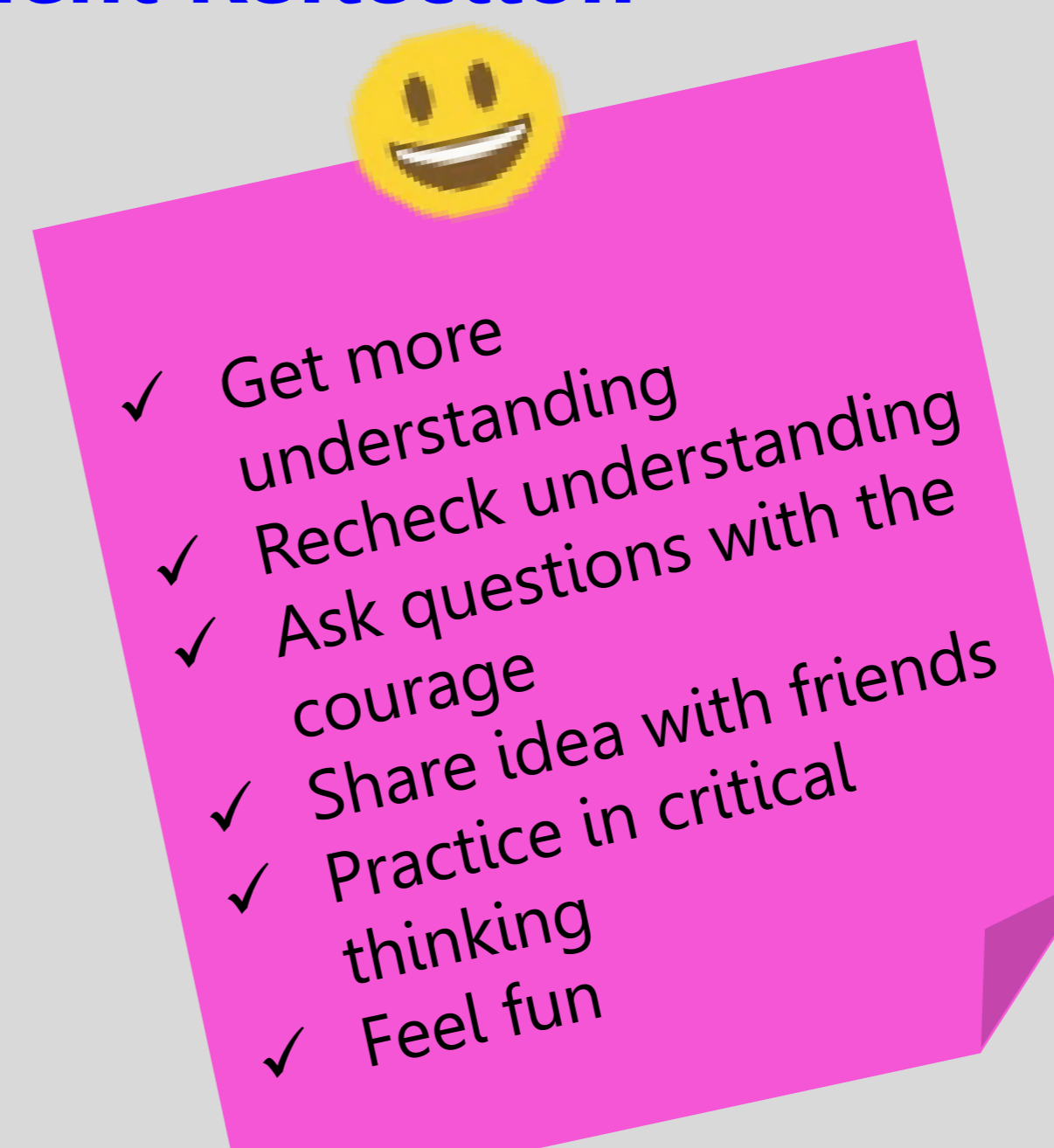
"How do you feel about fruit and vegetable salad activity?"

Outcomes

Student behavior



Student Reflection



Impacts

- This method could encourage students to understand the core content of this topic. Students have the courage to ask questions. Moreover, students are satisfied when used this activity in the practical laboratory.
- However, this activity should be spent more time. Further, students still needed a summary from the lecturer.

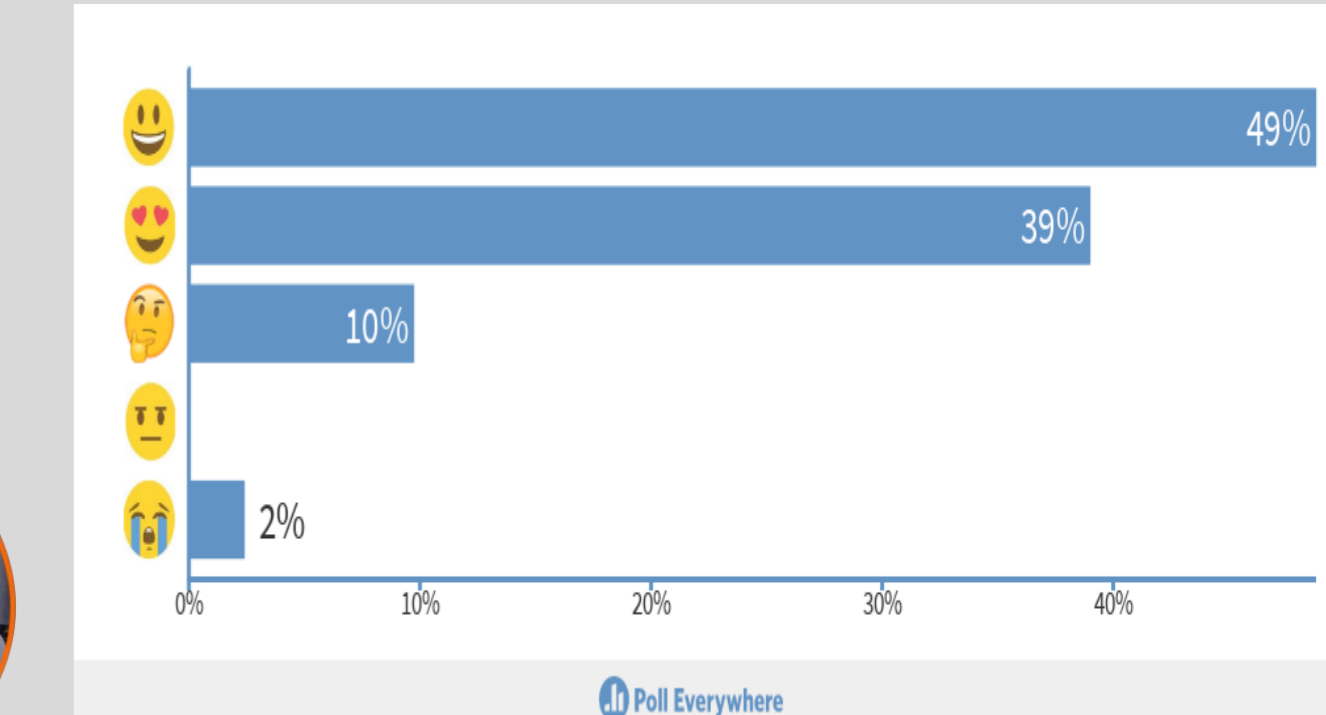
Future development

The activity should be conduct 2 times, the 1st, after the lecture class has finished, the 2nd, after the practical class has finished. Moreover, student knowledge should be evaluate before and after the activity.

References

1. Allen and Tanner. Cell Biol Educ. 2005 Winter; 4(4): 262-268.
2. Wilson et al. Curr Pharm Teach Learn. 2017 Nov; 9(6): 1151-1159.
3. Phillips et al. Am J Pharm Educ. 2015 Aug 25; 79(6):90.

Student complacency Section 1



Section 2

