Introducing Teaching Methods In Junior Science Education

Cooperative learning activities in G7 Biology at G.T. College

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Figure 1. G7 Leaflet design activity

Biology teachers engages students during the class through cooperative learning technique at G.T. College. Cooperative learning is a strategy used within certain groups of learners (Al-Rawi, 2013). This kind of group activity aim to understand a learning subject and improve their learning experience. This could build a friendly atmosphere for learning and improve students' academic results (Barron & Chen, 2008). In G7, three activities are integrated into the curriculum starting from semester one to semester three. They include group discussion, leaflet project, and a Biocraft project.

Learning activities such as group discussion could help to make lessons more interactive and to get students actively engaged (Gehlen-Bauum & Weinberger, 2014). This could improve our students' performance and also identify student difficult areas. Discussion topics can be extended beyond textbook materials to motivate student for self-directed learning and knowledge discovery. Students who understand the topic well could share their ideas with their classmates, while students who lag behind the process of learning would benefit from the group dynamics. This kind of learning activities is a good example of the cooperative learning techniques that cater for learning diversity as to foster microteaching among students (Rao & DiCario, 2000).

Our students finished a leaflet project in Ecology this year. Our G7 students designed a leaflet to raise the public awareness of saving various endangered species worldwide. Moreover, some other students introduced ecosystems in the foreign countries. This project was a good opportunity to showcase the art talent of our students. Previous studies have shown that the cooperative learning experiences can boost academic achievement and foster students' interpersonal relationships (Barron & Chen, 2008). Our students tend to enjoy these activities and their attention span has increased during the lessons, and they are more motivated to learn Biology.

Finally, our students worked in groups and carried out a Biocraft project in the last term. Our students have learnt about a variety of living organisms. This project will enable them to demonstrate their creativity and apply their biological knowledge in making a model of theoretical hybrid animal which can survive in the extreme environment. With their knowledge in the five kingdoms of living organisms, they needed to propose a **new hybrid** in the form of a biocraft model and present it to their classmates. Making a model is a fun way of learning biology. By means of cooperative learning, students would develop their creativity especially for students with talent in visual art. The learning experience will help the G7 students to "think out of the box" as they were made to create a hybrid animal which can not be found in the textbook.

Cooperative learning is an effective way to help our students improve their learning at G.T. College. Cooperative learning involves effective communication among the students. Research shows that communicating with students forces their peers to organize their thoughts and construct the knowledge (Gok, 2012). The cooperative method has the advantage of engaging G.T. students and making the lesson more interesting and effective. There is no doubt that they have benefited from these learning activities and have become more motivated to learn science.

Figure 2. G7 students extracted DNA from strawberries samples. They were happy and enjoyed various learning activities in the subject

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