

Bootsakorn Wongpan 2015: Enhancing Grade - 8 Students' Scientific Concepts of Digestive System by Teaching based on Constructivist Approach. Master of Education (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Mr. Sasithev Pitipornatapin, Ph.D. 102 pages.

The aim of this research was to study enhancing grade - 8 students' scientific concepts of digestive system by teaching based on constructivist approach. The participants for this study were 39 students in grade - 8, who studied science of the first semester in the academic year 2012 at a laboratory school in Bangkok. A survey test on the scientific conception of digestive system was used to collect data and frequencies and percentages were used to analyze the quantitative data. Content analysis was used to analyze the qualitative data.

The findings indicated that teaching based on Constructivist approach could enhance the students' understanding of scientific concepts on the digestive system. For the topic on the definition of digestion, the amount of students' understanding of scientific concepts increased by 20.51 percent of 7.70 percent. For the topic on the type of digestion, the students' understanding of scientific concepts increased by 61.54 percent of 12.82 percent. For the topic on the definition and function of the enzyme, the students' understanding of scientific concepts increased by 28.21 percent of 5.13 percent. For the topic on the gastrointestinal organs, the students' understanding of scientific concepts increased by 66.67 percent of 12.82 percent. For the topic on the non-gastrointestinal organs, the students' understanding of scientific concepts increased by 10.26 percent of 0.00 percent. For the topic on the function of the digestive organs, the students' understanding of scientific concepts increased by 17.95 percent of 2.56 percent. For the topic on the products of digestion, the students' understanding of scientific concepts increased by 38.46 percent of 20.51 percent. According to analyzing the students' understanding on the scientific concepts of digestive system, it is found that most of students enhanced the scientific concept almost in all areas after teaching. However, some students were grouped in Partial Understanding and Partial Understanding with a Specific Misconception. But some students were grouped in Partial Understanding with a Specific Misconception.

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Student's signature

Thesis Advisor's signature