

Chuenjit Saensut 2010: The Development of Concepts, Science Process Skills and Attitudes towards Teaching and Learning Genetics of Grade 9th Students using Inquiry Cycle. Master of Education (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Associate Professor Sunun Sung-ong, Ed.D. 249 pages.

The Purpose of this Research were 1) to investigate the concepts of Grade 9th students about genetic 2) to explore teaching strategies used genetics concepts 3) to compare genetics concepts between before and after using inquiry cycle 4) to compare science process skills between before and after using inquiry cycle 5) to study attitudes towards teaching and learning using inquiry cycle.

The groups of study were 84 Grade 9th students in second semester of 2008 academic year, 45 Grade 9th students in first semester of 2009 academic year and 2 science teachers. This research was case study which consists of 2 phases 1) investigate genetics concepts and explore the teaching strategies used genetics concepts 2) design a learning unit implement and evaluate the learning unit. The research instruments were open-end questions test about genetic concepts, structure interview with teacher, science process skills test and attitudes towards teaching and learning questionnaire. The data were analyzed by content analysis, means, percentage and standard deviation.

The result were 1) most of the students held Partial Understanding with a Specific Misconception and students had Specific Misconception about law of segregation, DNA, and gene 2) teaching methods were teachers' explanation and instructional materials were information sheets, diagram and worksheets 3) students' concepts on genetics were develop after student had been taught through inquiry cycle 4) student's science process skills were develop after student had been taught through inquiry cycle 5) students had positive attitudes towards teaching and learning after studied the genetic inquiry cycle.

Student's signature

Thesis Advisor's signature