

Kasina Rittreekoon 2014: The Development of Analytical Thinking Skills of Grade 10 Students Using Scientific Investigation Method in the Genetic Learning Unit. Master of Education (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Associate Professor Sawrarat Pattarathitinant, M.A. 105 pages.

The objectives of this study were to 1) study the development of analytical thinking skills of grade 10 students using scientific investigation method in genetic learning unit and 2) study the guideline of genetic learning and teaching using scientific investigation method in order to develop analytical thinking skills of forty-eight mixed-abilities grade 10 students. These grade 10 students were in a Humanities and Social program at a school in Chonburi province during the first semester of academic year 2012.

The tools used of this study were 1) two types of paper tests were created. The first one (40 points) comprised of 10 questions of 4 multiple choices and giving the reasons for the answers in writing. The second one (40 points) contained 4 questions with situations or data for students to analyze. The collective data was analyzed and transformed in to a mean score. 2) Teacher's after-teaching memo. 3) student's journals and 4) students' interviews about the learning and teaching were discerned by content analysis.

The results showed that the analytical thinking skills of the sample increased in the subject. At each stage of the learning and teaching process, teachers should have multimedia activities to motivate students' interests, assessment engaged in both group and individual based activities. Students should have a chance to brainstorm, explain and present their answers. These activities would motivate students' analytical thinking including a variety of assessments.

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Student's signature

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Thesis Advisor's signature