

ABSTRACT

Doli Feranika. 2012. Mapping of Knowledge Structure to Measure Student Capabilities in Understanding of Chemical Equilibrium Concepts. Thesis. Department of Chemistry Education, Faculty of Mathematics and Science, State University of Gorontalo. Supervisor: Drs. Mangara Sihaloho, M.Pd: Co-Supervisor: Dr. Lukman A.R. Laliyo, M.Pd, M.M.

The study aims to describe an capabilities in understanding and mapping of knowledge structure with regard to the concepts of chemical equilibrium by high school students of XI science class of Gorontalo City. The population in this study as a whole amounted to 534 students. Which were from SMAN 1 Gorontalo (187 students), SMAN 2 Gorontalo (90 students), SMAN 3 Gorontalo (195 students) and SMAN 4 Gorontalo (65 students). This study sample as a whole amounted to 103 respondents. Which were from SMAN 1 Gorontalo (22 students), SMAN 2 Gorontalo (25 students), SMAN 3 Gorontalo (28 students) and SMAN 4 Gorontalo (28 students). The instrument used is a Chemical Equilibrium Concept Mastery Test, amounting to 9 numbers of essay. The tests were analyzed using the persentstion and Knowledge Space Theory (KST).

In this study the knowledge structure of students states that do not master the concept of chemical equilibrium as evidenced by the acquisition of correct answers the students were very low (26.59%). Then, mapping the students' knowledge structure of the high school XI science class in the city of Gorontalo' pathway gain learning (learning paths) RK2-RK3-KS-TK2-TKT. The learning path is irregular, not tiered, and are not related. So it does not meet the rule learning paths suggested by experts.

Keywords: *Mapping, Knowledge Structure, Knowledge Space Theory (KST), Chemical Equilibrium.*