

ABSTRACT

Dinda Novia Wilandari. An Analysis on the Mental Models of the Students of SMAN 4 Pandeglang on the Learning Material of Electrolyte and Non-Electrolyte Solutions. Jakarta: Chemical Education Study Program, Faculty of Mathematics and Natural Sciences, Universitas Negeri Jakarta, June, 2016.

This research was intended to analyze the mental models of the students of SMAN 4 Pandeglang on the learning material of electrolyte and non-electrolyte solutions. This research was conducted at SMAN 4 Pandeglang from November 2015 to June 2016. The research subjects were the students of the Tenth Grade of Mathematics and Natural Sciences Program 1.

The method used in this research was analyzing the ethnography, which was one of the types of qualitative research focused on understanding the participants' culture. The data collection techniques used were class observation, interview, and student reflective journal writing. The analysis technique was qualitative data analysis. The quality standard used was trustworthiness with the criterion of credibility through prolonged engagement, persistent observation, progressive subjectivity, and member checking.

The research results showed that the students of SMAN 4 Pandeglang constructed mental based on their understanding and experiences, assisted with the analogies that they made and influenced by their characteristics and environment. The example is the students analogized ion that freely moves in electrolyte and non-electrolyte solutions with fish, bees and goats, while ionic bond was analogized with shadaqah, zakat, and waqf. The students' mental models on the learning material of electrolyte and non-electrolyte solutions were divided into mental model that was consistent with the concept and the mental model that deviated from the concept. The discrepancy of the student's mental models was influenced by their understanding and experiences.

Keywords: Mental Model, Ethnography, Electrolyte and Non-Electrolyte Solutions