

Akechai Waisopee 2010: Science Teacher Communication Behaviors: A Case Study of an Outstanding Chemistry Teacher. Master of Arts in Teaching, Major Field: Teaching Science, Department of Education. Thesis Advisor: Mr. Pongprapan Pongsopon, Ph.D. 215 pages.

The aims of this research are to study science teacher communication behaviors and the effect of science teacher communication behaviors on student learning. This project is a qualitative study and employs case study as a research design. The case is a selected outstanding Chemistry teacher and her five classes of grade 11 students in a special large sized school in Bangkok. The classes consist of one class of high achievers (33 students); two classes of average achievers (87 students) and two classes of low achievers (82 students). The study took place during the second semester, 2009 academic year. The data gathering techniques/tools include an assessment form of science teacher communication behaviors adapted from She and Fisher (2000) and participant observation on science teacher communication behaviors. Data analysis was divided into 2 parts; qualitative and quantitative. Coding and categorization were employed to analyze qualitative data. As for quantitative one, descriptive statistics including frequency and percentage were used. To increase trustworthiness, data triangulation was addressed.

The results showed that: 1) The outstanding chemistry teacher reflected five elements of effective communication behaviors in her teaching practice at high and often levels on Acid-Base Learning Unit; Challenging ideas, Encouragement and Praise, Non-verbal Support, Understanding and Friendly and Controlling. Her communication behavior was adapted to meet students' different learning styles and abilities. 2.) Science teacher communication behaviors have helped the students learn better. Communication behavior in challenging ideas helps the students learn science concept while the four remaining behaviors foster positive attitude towards science.

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Thesis Advisor's signature