

Teaching and Learning in Science Classroom: Case Study the Best Practice of Thai Instructors

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Abstract

The aim of this study was to investigate the features of teaching and learning in science classroom by the best practice of Thai instructors. There were four case studies consisting of one pre-service teacher and three in-service teachers. The data was collected by classroom observation and interview and analysed by interpretation. The results showed that the best practice of Thai instructors had the features as following 1) Students are involved with learning more than listening 2) Students are involved with development skills 3) Students are involved with higher order thinking 4) Students are involved with activities 5) Students are involved with exploration of their attitudes. Moreover, all of instructors were actively engaging their students to construct knowledge themselves.

Keywords: Teaching and learning in science classroom, Active learning, Case study, The best practice

1. Introduction

Science educational plays an important role in the current which provide students to gain scientific knowledge and critical thinking skills (Nuangchalerm, 2010). However, there are many science teachers still perform as teacher centre and lecture instruction. The lecture instruction is the teaching that teachers transfer their knowledge to students and makes the students lack of active learning in classroom (Ye Zhao, 2003). To understand how to teach and learn science in Thai context, the aim of this research was to study the best practice of Thai instructors' classroom selected by a supervisor to find the features of good teaching and learning.

2. Methodology

The case study was suggested from their supervisor. There were four case studies including; one pre-service teacher from Khon Kaen University and three in-service teachers from Sidawittaya School, Khoksiwittayasan School and Anuban Chaiyaphum School. This research collected data by classroom observation and interview. The data were analysed by interpreting data according to the characteristics of active learning of Bonwell & Eison (1991).

Table 1 the characteristics of active learning (Bonwell & Eison, 1991)

- Students are involved in more than listening
 - Less emphasis is placed on transmitting information and more on development of students' skills
 - Students are involved in higher order thinking (analysis, synthesis, evaluation)
 - Students are engaged in activities (such as writing, reading, discussing, and observing)
 - Greater emphasis is placed on students' exploration of their attitudes and values
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3. Research Findings

The results showed that the best practice of Thai instructors had the features of teaching corresponding the characteristics of active learning (Bonwell & Eison , 1991) which are;

- 1) Students are involved in more than listening.
- 2) Students are involved on development of students' skills.
- 3) Students are involved in higher order thinking.
- 4) Students are involved in activities.
- 5) Students are involved on students' exploration of their attitudes.

In addition, all instructors gave an opportunity for the students to prepare instruments and did the experiment by themselves with their group. This helped students to construct knowledge and discover a new knowledge by themselves.

4. Conclusion

The best practice of Thai instructors had the features of teaching corresponding the characteristics of active learning (Bonwell & Eison , 1991). All of four case studies used the teaching method that focuses on students' participation in teaching by experiment within group. There is an opportunity for students to take part experimental activity by themselves. In addition, all of Thai instructors were actively engaging students to construct knowledge themselves.

References

- Bonwell, C.C., & Eison, J. A. (1991). **Active Learning: Creating Excitement in the Classroom: Asheeric Higher Education**. George Washington University. Washington DC.
- Nuangchalerm, P. (2010). **Engaging students to perceive nature of science through socio scientific issues based instruction**. European Journal of Social Sciences, 13, 34-37.
- Zhao, Y. (2003). **The use of a constructivist teaching model in environmental science at Beijing Normal University**. The China Paper, 78 -83.