

## **ABSTRACT**

Pedagogical content knowledge (PCK) is the ways to present subject content that make it accessible to others. The purposes of this study were to assess science teachers' PCK and to compare teachers' PCK between Malaysia and Thailand. The participants of this study included 254 science teachers from Thailand and 164 science teachers from Malaysia. In Thailand, they have been participated in many professional development programs with the Institute for the Promotion of Teaching Science and Technology (IPST). In Malaysia, the teachers have connections with RECSAM and participated its program for science teacher professional development. The participants volunteer to give their information. The Regional Centre for Education in Science and Mathematics (RECSAM) were collaborated with Thaksin University in terms of collecting data in Malaysia. Teacher's Orientation to Teaching Science (TOTS) questionnaire was developed based on the conceptualization of Orientation toward science teaching proposed by Magnusson et al (2002). After transform raw data to Rarch data, the results from both countries were compared. The highest agreement of orientation of teaching science of Malaysian teachers was discovery learning followed by guided inquiry, project-based inquiry and inquiry. The highest agreement of orientation of teaching science of Thai teachers was inquiry followed by project-based science, guided inquiry and discovery learning. Contemporary-Students-Centered orientation was the highest agreement that is an ultimate goal of science teaching for both Malaysia and Thailand teacher participants. The result from qualitative part supported the notion of the relationship between teacher's orientation to teaching science and classroom practice. The participating teachers design classroom activity based on their orientations.