Notice of the Final Oral Examination for the Degree of Doctor of Philosophy of

MERCY PENA-MORALES

MSc (University of Puerto Rico, 2003)  
BA (Universidad Sur Colombiana, 1995)

“Pedagogical Content Knowledge in an Educational Context (PCK-EC)”

Department of Curriculum & Instruction

Wednesday, April 13, 2016  
10:00 am  
David Turpin Building  
Room A136

Supervisory Committee:
Dr. Tim Pelton, Department of Curriculum & Instruction, University of Victoria (Supervisor)  
Dr. Leslee Francis-Pelton, Department of Curriculum & Instruction, UVic (Member)  
Dr. Wanda Boyer, Department of Educational Psychology & Leadership Studies, UVic (Outside Member)

External Examiner:  
Dr. Bethany Bos, Department of Curriculum & Instruction, Texas State University

Chair of Oral Examination:  
Dr. Michael Webb, Department of Political Science, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

The Pedagogical Content Knowledge in an Educational Context (PCKEC) model is proposed as a framework to support teachers, coaches and researchers in the examination of teacher knowledge within a specific context and with a particular focus. This framework combines the theoretical and practical aspects represented by five dimensions of teachers’ attitudes and teachers’ knowledge (technology, learners’ cognition, subject matter, pedagogy) within an educational context that includes curricular, technological, social, cultural, and teaching-learning contexts.

Two case studies were used to examine the utility of the proposed PCKEC model. Data collected included: semi-structured initial and final interviews; teacher’s journals of reflection (completed after teaching each lesson); direct observations during lessons; observations from video recordings of lessons; transcripts from initial and final interviews; and other collected documents in regards to the educational context. The interpretive repertoires method allowed us to identify and characterize groups of themes in each dimension of teachers’ attitudes and knowledge, and supported inter-relationships between themes.

The PCK-EC was useful to support a deep description of a collection of themes by using different sources of data. Analysis of each one of these collections of themes allowed us to understand teachers’ PCK-EC and provided insights about how different technological tools might affect teachers’ attitudes and their knowledge.

The dimensions of teachers’ attitudes and knowledge are not isolated, but rather they are inter-related during teaching practice. It is possible to recognize inter-relationships (outgoing and incoming) between themes (within and across dimensions). It is suggested that the frequency of the outgoing and incoming inter-relationships found between themes might give us an average weight for each of the dimensions of the PCK-EC and this could represent teachers’ attitudes and knowledge used during teaching practice.

The collection of themes identified might be useful as a tool to support teachers as they explore their attitudes and their knowledge needed for teaching a specific topic with the use of technological tools, and may provide coaches with an effective mechanism to support the identification of an individuals’ PCK and development needs.