

# PRESENTING VIDEO DATA TO CONNECT RESEARCH AND PRACTICE: PEDAGOGY IN MIDDLE SCHOOL MATHEMATICS

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This poster presentation will illustrate how analysis summaries of video data collected for classroom-based research in middle school mathematics have been structured for use in teacher education and professional learning activities. Connecting research and practice in this way is one aspect of a large scale study that addresses the questions: (i) How does middle school mathematics pedagogy differ across regions of Canada? (ii) How can differences in pedagogy establish the basis for further research into regional differences in mathematics achievement?

The enactivist framework (Maturana & Varela, 1992) that guides this research prompts a fine analysis of both observable and implicit cultural practices within a self-sustaining social system like in a mathematics classroom or professional learning setting. Data were collected from focus group interviews and classroom observations and the review of lessons by teachers and researchers was similar to the TIMSS video study (Hiebert et al., 2003). The focus here is on presenting an analysis of the classroom video data in a format that will be useful in professional learning activities.

Video data collected from lessons in four middle school mathematics classrooms will be represented in the poster. These summaries are structured in an accessible format to illustrate lesson sequences (e.g., who is involved in conversations, the mathematics that is addressed, time spent on each aspect of the lesson), transcription of student and teacher contributions (e.g., teacher prompting and questioning, student contributions), reference to video clips for a visual of key episodes, and images of classroom artefacts (e.g., student work, physical arrangement of the classroom).

Using classroom-based data in this way provides a window into classroom practices and can be used to stimulate discussion in both research and practice about observable teaching practices and the emergence of implicit teaching and learning culture in middle school mathematics classrooms.

## References

- Hiebert, J., Gallimore, R., Garnier, H., Bogard Givvin, K., Hollingsworth, H., Jacobs, J., ... Stigler, J. (2003). *Teaching mathematics in seven countries: Results from the TIMSS 1999 video study (NCES 2003-2013 Revised)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Maturana, H., & Varela, F., (1992). *The tree of knowledge: The biological roots of human understanding*. Boston, MA: Shambhala Publications.