Video analysis is a powerful observational tool that can help deepen our understanding of classroom practices. As the technology needed to conduct video-based pedagogical research has become increasingly available, video analysis has secured a prominent place in the “toolboxes” of educational researchers studying the complex phenomena that take place in classrooms. It can be effective in a wide variety of research settings as well as in the professional development of teachers. With insightful coding schemes, video analysis can generate valuable evidence in the study of the implemented curriculum.

For the purposes of a dissertation project, structures of 40 Finnish and Icelandic mathematics lessons were analyzed. The method of lesson structure analysis, which was developed specifically for this project, offers a means to investigate the different forms of classroom interaction teachers use to achieve their pedagogical goals. The method requires two coding passes. The first pass is inspired by the TIMSS 1999 Video Study and is used to distinguish the main pedagogical functions of lesson elements. The second coding pass, which uses ideas from the Learner’s Perspective Study as well as TIMSS, focuses on the forms of classroom participation. The coding categories are sensitive to the sample.

Videos from Finnish and Icelandic mathematics classrooms are analyzed to demonstrate the coding method for lesson structure. These countries were chosen in part because of their performance in the PISA studies; Finnish students have excelled in all three PISA studies, while Iceland is the only country where the girls have significantly outperformed the boys in
mathematics. The recordings—two lessons from ten randomly chosen mathematics teachers of 14 and 15-year-olds in each country—were collected in 2007.

Based on this sample, there are differences in how Finnish and Icelandic mathematics lessons are structured. More than one half of the Icelandic lessons in the sample exemplify the “einstaklingsmiðað nám,” or individualized learning-strategy, the nationally endorsed pedagogical philosophy. Public instructional discourse can be missing entirely from these lessons, and, instead, the teacher tutors each student independently. This is in stark contrast with the Finnish lessons, where teacher-lead activities in which often the whole class is involved are emphasized. Based on the video evidence, Finnish teachers are rather traditional and pedagogically conservative. Their classroom practices often include a substantial social component, while many students in Iceland are getting used to learning independently, without significant collaboration with others.

The presentation of the method of lesson structure analysis as well as the results of the video study would fit well into the poster session format. The two coding passes can be explained in some detail on a poster. Statistical charts and lesson diagrams, such as the one shown below this text, can also be effectively displayed. Furthermore, copies of the finished dissertation and an article based on the study can be made available for the participants who want to learn more.