

Doing quantitative content analysis: Unitisation, coding, reliability and validity

Dr. J. W. Strijbos

Leiden University, the Netherlands

jwstrijbos@fsw.leidenuniv.nl

Topic & goals

Collaborative learning is nowadays regarded as a core contributor to the development of key competencies, for example communicative and problem solving skills. However, empirical evidence also suggests that specific support is needed to fully develop the advantages of collaborative learning. Supporting collaborative learning presumes that the mechanisms of collaborative learning are well understood. In this respect analysis of collaborative learning processes is a key aspect of developing said understanding. Depending on the specific research question at hand, qualitative or quantitative methods have to be applied. In this workshop, I will introduce how to apply quantitative content analysis procedures that are typical for CSCL research, but not the only methods that are possible to study collaborative processes. Moreover, these methods can also be applied to code and statistically analyse for example content of learning journals or reflection reports. Quantitative content analysis procedures focus on the segmentation, coding and statistical analysis of discourse data. In this PDC participants will work with data provided by the PDC leader and the outcomes provide input for discussion on guidelines for doing content analysis. Furthermore, the benefits of a mixed-method approach, i.e. simultaneous application of qualitative and quantitative methods, will be illustrated. Due to the short duration of the workshop, participants are asked to read some relevant papers beforehand.

Participants

Due to the hands-on component, there is a maximum of 30 participants.

Required literature

Hmelo-Silver, C. E. (2003). Analyzing collaborative knowledge construction: multiple methods for integrated understanding. *Computers and Education*, *41*, 397-420.

Zemel, A., Xhafa, F., & Cakir, M. (2007). What's in the mix? Combining coding and conversation analysis to investigate chat-based problem solving. *Learning and Instruction*, *17*, 405-415.

Strijbos, J. W., Martens, R. L., Prins, F. J., & Jochems, W. M. G. (2006). Content analysis: What are they talking about? *Computers and Education*, *46*, 29-48.

Extended literature (optional)

Barron, B. (2003). When smart groups fail. *The Journal of the Learning Science*, *12*, 307-359.

Weinberger, A., & Fischer, F. (2006). A framework to analyze argumentative knowledge construction in computer-supported collaborative learning. *Computers & Education*, *46*, 71-95.

Brief Biography

Dr. Jan-Willem Strijbos is a post-doctoral researcher at the Centre for the Study of Learning and Instruction at Leiden University (Netherlands). His research focuses on peer assessment and peer feedback, (computer-supported) collaborative learning, and discourse analysis.