Digital Distance Education
- A Longitudinal Exploration of
Video Technology

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Abstract

The context of this thesis is digital distance education. Distance education has developed from correspondence courses, based on letters sent by mail between student and teacher, to digital distance education with interactive video classes from anywhere, as long as a computer/tablet/smartphone and an Internet connection are available. The development of technology, particularly with the introduction of the Internet, has completely changed the possibilities for teaching, learning, interaction, and communication at a distance. Many technologies can be used in distance education, but this thesis aims to: *Better understand the possibilities and limitations of video in digital distance higher education*. The research has three elements of analysis: *1) video technology, 2) distance courses, and 3) distance teachers*. Each allows a focus on how distance courses with video are designed and on teachers' perspectives on the use of video in distance education. The first focus on course design is examined through two research questions. RQ1 asks, *How is digital video used in distance higher education? When teachers design distance courses with digital video; a) which categories of video are used or not used? b) how much are these categories used? c) why are they used or not used? And d) how are they used?* Complementing RQ1, RQ2 asks, *How do course designers respond to the possibilities and limitations of video for distance higher education?* Addressing the second focus of the thesis on teacher perspectives, RQ3 asks, *What are the teacher's attitudes and perceptions about the use of digital video in distance higher education?*

With a comprehensive literature review as a foundation, the results of this thesis include a classification system with two main categories; *recorded* and *live video* that is developed and used to orient an empirical investigation. The data for this investigation was collected through a national web-based questionnaire. Then, based on the survey, a specific higher education institution was selected for an interview study with teachers using video conferencing in distance courses in Teacher education. Interaction and communication are central concepts in this thesis, and the analytical lens combines the socio-cultural perspective and the theory of affordances.

The results indicate that across types, video is mostly used as a supplement to other resources. Further, a correspondence is found concerning, on the one hand, teachers' experience of distance education and participation in in-service training, and on the other hand, their use of video in teaching. In general, the most reported reasons why teachers do *not* use video are that it does not bring anything and takes too much time. Many of the constraints that teachers perceive are related to time; e.g. competition between an ambition to teach according to a student-centred approach but also a strong feeling of responsibility of delivering content to students. The technology of video has the affordances of mediating a teaching and learning environment similar to the one in the classroom, but conditions such as large groups or many students and the difficulty of perceiving non-verbal signals through video, affect the communication situation negatively and reduce possibilities of interaction.

As a systematic study investigating the mainstream use of technology and media, this thesis contrasts with many other studies, which are often relatively small and local in nature, conducted by enthusiastic teachers investigating the use of one specific technology. The results show how the mainstream use of technologies such as video change conditions for distance teaching and influence how we think and interact with others and our environment.