

Technologies and techniques in the learning of endodontics

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Project summary

The project investigates the teaching and learning of endodontics, a speciality within dentistry concerned with the tooth pulp and the tissues surrounding the root of the tooth. The endodontic treatment and its procedures have historically been hard to make comprehensible for students. Provided the limited view into a tooth, it is problematic to demonstrate the actions and expertise of senior practitioner, such as his or her embodied experience of coordinating actions and perception, the dexterity and precision needed when undertaking a certain procedure and the delicacy of decision-making during the process. At the Department of Odontology at The University of Gothenburg, additional possibilities of video recording endodontic procedures through microscopes have recently been made available. The display of such recordings in a nearby seminar room creates new possibilities for learning. The students are able to see the details of the work of a dentist in the midst of a treatment of a patient. As the recordings are made in real time, they also have opportunities to pose questions. In the seminar room, the students are joined by a seminar leader, who is able to clarify things as well as using the video as a starting point for 'mini-lectures' on certain topics. These sessions are used in conjunction with lab work, in which students use 'mock ups' to train their own skills in treating the tooth. In the research project, both the video-enhanced activities and the lab work will be recorded using a set up of several video cameras and microphones. Access to the video material provides two important entrance points for analysis. First of all, the recorded interaction between experts and novices shows the skills and reasoning that belongs to endodontics as a domain of knowledge and practice; moreover, it shows these skills and reasoning in action and in situ. Second, the material makes it possible to analyse the interactional organisation of the educational arrangements that are designed to foster these skills. While the skills and reasoning in many respects are indigenous to the specific domain, the methods of instruction in some sense transcend this specificity, thereby having a relevance to education in other areas.