Hands-on (micro)surgical skills training: Great expectations and learning outcomes

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The Institute of Surgical Research of the University of Szeged was founded in 1951 to teach basic surgical techniques to undergraduate students in organized ways. The program included 6 practical sessions with asepsis and knot tying, sutures, ligation and cannulation of vessels and assisting at operations using anesthetized animals. Based on this tradition, more focussed, structured and specialized courses: Basic Surgical Skills, Advanced Surgical Skills and Microsurgery were developed in the 1990’s and introduced into the curriculum of undergraduate students both in the Hungarian and English program of the Faculty of Medicine and the Faculty of Dentistry.

The popular, elective program was run for highly interested, motivated students, but recently, the courses became all compulsory. It was a challenging task to develop a teaching system that would be attractive enough for those students also who otherwise would not been enrolled on a voluntary basis. During the preparatory period, we were particularly interested in the feedback of former students who completed successfully the previous elective Basic Surgical Skills courses. Based partly on their suggestions (1) we made on-line accessible the recorded demonstration videos and detailed, step-by step description of the assessment criteria for a successful completion of a practical exam task; (2) the basic tasks were presented by the teachers and then were repeated 3 times during the practices by the students (3) small-group workshops were introduced to discuss any problematic issues, and (4) practical exams were organized with OSCEs with objective assessment and examination protocols; (5)in case of dentistry students the topics were expanded with dentistry-specific specialties (e.g. mucosal sutures)

Quantitative scores and qualitative written feedbacks were collected during the last semesters and the data clearly demonstrate that high level of curiosity and motivation can be aroused, and the satisfaction rates about the course of the compulsory courses did not significantly differ from those for the elective courses (even in case of the 3-5% of the students would not have chosen ‘surgical skills’ courses if it had not been made compulsory). Besides, the comparative practical exam marks of elective and compulsory courses were statistically not significantly different either. Interestingly, 85\% of the 2-year Hungarian students and 95\% of the English-program participants expressed their readiness to follow a carrier pathway leading to a manual (“surgical”) profession and this interest was mainly based on their experiences obtained during the course and the practical exam.
Remarkably, all of the participants (100%) of Microsurgery course of the Faculty of Dentistry in the Hungarian program and 94% in the English program declared that they would have been enrolled in microsurgery courses independently from its compulsory nature. The satisfaction rates were also high, and 12-22% (in Hungarian and English classes, respectively) would use microsurgical techniques in the oral cavity in future clinical dentistry practice.

We concluded that regular and meaningful feedbacks together with a supportive, objective and reassuring assessment scheme will provide high rates of student’s satisfaction and a comprehensive view on the practical values of hands-on (micro)surgical skills training.