

COMPARATIVE STUDY OF THE USABILITY OF THE NEW E-MIS PLATFORM TELMA FOR DIFFERENT LEVELS OF SURGICAL EXPERIENCE

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BACKGROUND. The eclosion of Minimally Invasive Surgery (MIS) entails the need to incorporate new training methods that allow surgeons to acquire the skills inherent in such surgical techniques, implying a prior cognitive training. To achieve it, the surgeons consider that the implementation of an e-learning platform with multimedia contents would be very useful [1]. For this purpose the new e-MIS TELMA platform has been developed.

PURPOSE. The objective is to perform a comparative study of the usability of TELMA for different levels of surgical experience.

METHOD. Three expert and five novice surgeons have participated in the study carrying out a list of tasks to be performed in the TELMA platform. An usability validation was performed by using a web analytics method. Key Performance Indicators (KPI) were defined to get objective metrics.

RESULTS. Expert surgeons were able to accomplish all tasks in a less effective way than novices, since they needed more clicks and time to perform the tasks. An important feature of the TELMA platform is creating a surgical video, since contents of TELMA are video-based. In this sense, novice surgeons exploit better the feature of creating videos, as not all experts were able to complete this task. It is also interesting to remark that the necessary number of clicks to get any of the functionalities of the TELMA platform is lower in novices than experts, so it is easier to them to find the features of TELMA in few steps.

CONCLUSIONS. According to the assessment of the surgeons, a platform with an easy to use and attractive user interface has been achieved, with easy navigation and user interaction. However, the results show that expert surgeons have more difficulties to use and interact with TELMA, so that in the future it is necessary to adapt the features of TELMA to expert surgeons, because they have less skill in handling the new technologies than novices.

REFERENCES.

[1] LF Sánchez-Peralta, FM Sánchez-Margallo, JB Pagador, JL Moyano-Cuevas, JF Noguera-Aguilar, P Sánchez-González P, EJ Gómez-Aguilera. *e-MIS: e-learning and multimedia contents for minimally invasive surgery*. SMIT 2010. Trondheim, Norway. September 2-4, 2010.