Learning-Teaching Experience about the Design of Care Applications for Nursing Professionals

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Abstract : Background: Computer Science is a field that transcends other disciplines of knowledge because it allows to support all kinds of physical and mental tasks. Health centres have a greater number and complexity of technological devices and the population consume and demand services derived from technology. Also, nursing education plans have included competencies related to and, even, courses about new technologies are offered to health professionals. However, nurses still limit their performance to the use and evaluation of products previously built. Objective: Develop a teaching-learning methodology for acquiring skills on designing applications for care. Methodology: Blended learning teaching with a group of graduate nurses through official training within a Master's Degree. The study sample was selected by intentional sampling without exclusion criteria. The study covers from 2015 to 2017. The teaching sessions included a four-hour face-to-face class and between one and three tutorials. The assessment was carried out by written test consisting of the preparation of an IEEE 830 Standard Specification document where the subject chosen by the student had to be a problem in the area of care. Results: The sample is made up of 30 students: 10 men and 20 women. Nine students had a degree in nursing, 20 diploma in nursing and one had a degree in Computer Engineering. Two students had a degree in nursing specialty through residence and two in equivalent recognition by exceptional way. Except for the engineer, no subject had previously received training in this regard. All the sample enrolled in the course received the classroom teaching session, had access to the teaching material through a virtual area and maintained at least one tutoring. The maximum of tutorials were three with an hour in total. Among the material available for consultation was an example of a document drawn up based on the IEEE Standard with an issue not related to care. The test to measure competence was completed by the whole group and evaluated by a multidisciplinary teaching team of two computer engineers and two nurses. Engineers evaluated the correctness of the characteristics of the document and the degree of comprehension in the elaboration of the problem and solution elaborated nurses assessed the relevance of the chosen problem statement, the foundation, originality and correctness of the proposed solution and the validity of the application for clinical practice in care. The results were of an average grade of 8.1 over 10 points, a range between 6 and 10. The selected topic barely coincided among the students. Examples of care areas selected are care plans, family and community health, delivery care, administration and even robotics for care. Conclusion: The applied methodology of learning-teaching for the design of technologies demonstrates the success in the training of nursing professionals. The role of expert is essential to create applications that satisfy the needs of end users. Nursing has the possibility, the competence and the duty to participate in the process of construction of technological tools that are going to impact in care of people, family and community.

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