Advances in Intelligent Systems and Computing 1008

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Methodologies and Intelligent Systems for Technology Enhanced Learning, 9th International Conference, Workshops

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Preface

Education is the cornerstone of any society, and it serves as one of the foundations for many of its social values and characteristics. Different methodologies and intelligent technologies are employed for creating Technology Enhanced Learning (TEL) solutions. Solutions are intelligent when they are rooted in artificial intelligence, stand-alone, or interconnected to others. They target not only cognitive processes but also motivational, personality, or emotional factors. In particular, recommendation mechanisms enable us to tailor learning to different contexts and people, e.g., by considering their personality. The use of learning analytics also helps us augment learning opportunities for learners and educators alike, e.g., learning analytics can support self-regulated learning or adaptation of the learning material. Besides technologies, methods help create novel TEL opportunities. Methods come from different fields, such as educational psychology or medicine, and from diverse communities co-working with people, such as making communities and participatory design communities. Methods and technologies are also used to investigate and enhance learning for "fragile users," like children, elderly people, or people with special needs.

This year's technical program of MIS4TEL conference presents both high quality and diversity, with contributions in well-established and evolving areas of research. The program features also three selected workshops, which aim to provide participants with the opportunity to present and discuss novel research ideas on emerging topics complementing the main conference. In particular, the workshops focus on multi-disciplinary and transversal aspects like TEL in nursing education programs, TEL in digital creativity education, and student assessment and learning design evaluation in TEL systems. A total of 19 quality papers, with authors coming from various European countries, have been selected for the workshops and included in the present volume.

We would like to thank the sponsors (IEEE Systems Man and Cybernetics Society Spain Section Chapter and the IEEE Spain Section (Technical Co-Sponsor), IBM, Indra, Viewnext, Global Exchange, AEPIA and APPIA), and finally, the

Local Organization members and the Program Committee members for their hard work, which was essential for the success of MIS4TEL'19.

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http://www.mis4tel-conference.net/

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Workshop on Technology Enhanced Learning in Nursing Education

In the field of nursing, learning outcomes involve nurses both as learners and as educators.

As learners, they are involved in basic and post-basic academic programs, whereas they act as educators when they are engaged in health educational programs to enhance health literacy levels in the community.

In nursing research, learning outcomes have been widely investigated on different target populations, such as nursing students and staff, as well as patients and their caregivers.

However, the current exponential growth of the technology in the educational field makes it necessary to explore its contribution in enhancing expected outcomes for these populations, in order to facilitate the development of more accurate guidelines, protocols, and procedures.

According to some evidence, the quality of learning outcomes in basic and post-basic nursing academic programs could be potentially improved through technology-based systems that represent the basis for creating smart environments, where models like the high-fidelity simulation deserve great attention for the development prospects that they offer.

However, at this regard more robust confirmations are needed, as well as to discuss ethical and philosophical implications of technology enhanced learning in the field of caring. Furthermore, little is known about the use of technology to enhance health literacy levels in the community.

For these reasons, this workshop aims to share the best available knowledge about the application of technology-based systems into basic and post-basic nursing academic programs, as well as health educational programs aiming to enhance health literacy levels in the community.

In order to pursue this intent, workshop topics have been grouped into the following three main discussion points

First, topics on education in nursing academic programs aim to discuss the effects of simulation and other technology-based systems on learning quality, including ethical, legal, and philosophical perspectives.

Secondly, topics on community health educational programs aim to discuss the impact of technology in improving health literacy levels in the community.

Finally, the workshop intends to provide a complete overview of technology-based methods as useful tools to improve the learning of the nursing process in clinical settings.

The 2nd edition of MIS4TEL Workshop on Technology Enhanced Learning in Nursing Education includes ten accepted papers, significantly increased in comparison with the previous edition.

I would to thank the authors, the reviewers, Professor Rosaria Alvaro, my co-chairman, and the PC members Professor Elvira Popescu and Professor Pierpaolo Vittorini, whose support made this work possible.

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Problem Solving Incorporated into Blending Learning in Nursing Masters Degree

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Abstract. Online and face-to-face learning are integrated in a teaching format called blended learning. In recent years, educators have begun to use blended learning for a number of education related purposes. Typically, blended learning is used to involve the nurse students in a more active and constructive learning process. In a pilot project, five modules of a Masters nursing course were redesigned and implemented in blending learning format. While redesigning the modules, the first challenge was to assure the balance between online and face-to-face classroom activities. The second was to incorporate problem solving phases into blended learning in an efficient way. Moodle is the learning management system used for the online teaching and learning activities. The preliminary results concern the description of the redesign process of the five modules and their implementation. Some critical issues emerged and they must be corrected to improve the teachers' involvement and the redesign.

Keywords: Nursing education · Ill problem · Mind map · Problem solving · Blended learning

1 Introduction

Experiment of Enhanced Learning (EXEL) is the University's project of innovation in education (2017–2019). It is devoted to the promotion of innovative teaching and learning methods and an educational approach that combines classroom and distance learning.

The strategic aim of EXEL is to educate the teachers about student-centered teaching and learning rather than only being concentrated on the teacher and on the discipline, called teacher-centered approach [1]. This is done by the use of active teaching and learning methodologies and technologies.

The EXEL actions are planned in short, mid, and long period of time. In the short term, meetings with groups of teachers were organized to guide them in the teaching and learning innovation process. The innovation process is focused on the crash course "Arena blended curriculum ABC" (adapted to the Italian system with University College London collaboration) [2] and the online course "How to re/design your course with blended learning" (adapted to the Italian system with Utrecht University collaboration) [2].

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