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PROJECT VIRTUAL HOSPITAL. A SWOT ANALYSIS

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ABSTRACT

The report presents a project concerning the electronic training in higher education – a Virtual Hospital, financed by the European Commission under the "Lifelong Learning Programme" (LLP) and the joint participation of the Medical College to the Medical University Plovdiv in this project.

The clinical cases described are real, taken from the actual professional work with the informed consent of the patients. The main purpose is to achieve the closest simulation of the hospital environment where the documentation of the cases is carried out in accordance with the principles, standards and procedures of documenting a hospitalised patient adopted by the respective hospital facility. Students have access to complex and unprocessed information presented in different formats – textual, audio, video, reaction photos, in the way it takes place in the professional daily routine. Besides the detailed description of actual clinical cases, the virtual hospital also offers tools for their study /e-lessons/.

A pilot testing has been conducted in the Medical College Plovdiv. The report presents the results of the surveys and the pilot testing, which demonstrate the positive opinions and attitudes of the future users.It also includes a SWOT analysis and its results.

Key words: clinical case, virtual software training, electronic lessons, survey, analysis.

INTRODUCTION

The project Virtual Hospital is financed by the European Commission under the "Lifelong Learning Programme" (LLP) – Leonardo da Vinci. Duration 2007 – 2013. The purpose of the project is the creation of a virtual hospital for basic and further training of nurses and acquisition of key competencies – clinical assessment and professional communication.

Its partners are:

- Belgium: Coordinator: HEMES /Haute Ecole Mosane d'Enseignement Supérieur, Institut Sainte Julienne/, Liège;
  CHC /Centre Hospitalier Chrétien/, Liège;
  CRIG /Centre de Recherche des Instituts Groupés de HEMES/, Liège;
  ISSIG /Institut Supérieur Soins Infirmiers Galilée/ Bruxelles.
- Bulgaria: the Medical College of the Medical University Plovdiv.
- France: IFSI CHU /Institut de Formation en Soins Infirmiers du Centre Hospitalier Universitaire/, Rouen
- Italy: Scuola per infermieri professionali alla Facoltà di Medicina e Chirurgia di Torino, Cuneo
- Portugal: Escola Superior de Enfermagem de Coimbra
- FINE /European Federation of Nurse Educators/

The software is organised in an on-line system of virtual patients, with access to complex medical documentation, documents in various formats - audio, video, text etc., pedagogical means for the study of the clinical cases and software especially developed for the project. The training includes an accessory tool for enriching the learning methods in clinical practice which has the following advantages:

- Rich variety of clinical cases;
- Multicultural aspect of the nursing care;
- Easy access to clinical information;
- Flexible time and location for training;

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- Reducing the stress of entering real hospital environment.

The Virtual Hospital project presents fully described and documented real clinical cases, patients' informed consent forms, medical documents, photos, video clips, nursing documentation and tools for the study of the clinical cases. Two cases have been worked out:

- Case study V.N. 10/1 – a patient with a stroke, neurology department

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- Case study E.D.K. 41/3 – a female patient suffering from rectorrhagia, surgical department

Author: Nelly Boicheva

The following electronic lessons have been developed:

- Nursing diagnosis – I year
- Care of pressure sores – II year
- Test – aseptic dressing – II year
- Changing an ostomy pouching system – II year

The promotion of the project is carried out at the level of the speciality "Nurse", at a university level, at national level through slogans and articles and at international level – a FINE conference.

Presentation of the project to the target group - student and lecturer nurses and feedback.

The feedback gives an idea of the self-evaluation of the participants in the survey regarding the extent to which the project would assist them in forming their clinical assessment and professional communication. The answers vary from – "Yes, very much" to – "Yes, to a certain extent", without any negative ones. **(Fig.1)**

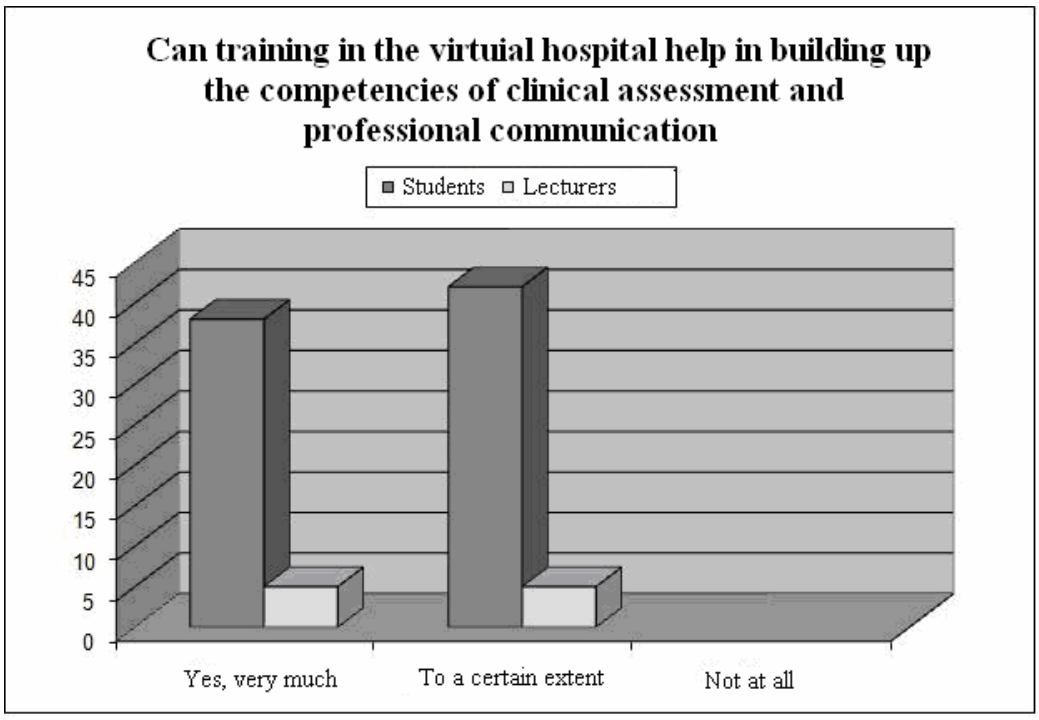

Fig. 1

It was essential that the participants figure out the extent to which the cases described matched the real hospital environment. Some very good opinions were expressed. **(Fig. 2)**

All the lecturers answered to the question whether they would have liked to study / teach in VH: "Yes, I'll be interested to", whereas the students also gave, though a small percentage of negative answers, the reasons for which being not only the software programme, but on the part of the students themselves as well, such as: "Because I'm not good enough with computers" and the like. **(Fig. 3)**

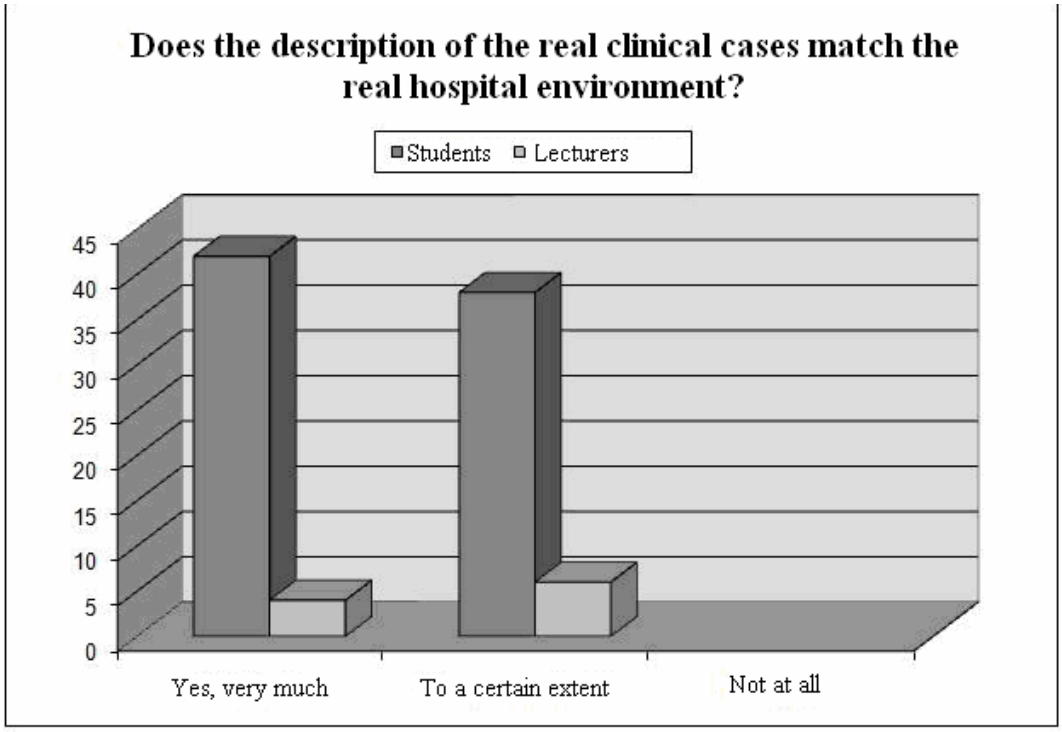
Does the description of the real clinical cases match the real hospital environment?
Students
Lecturers
45
40
35
30
25
20
15
10
5
0
Yes, very much
To a certain extent
Not at all

Fig. 2

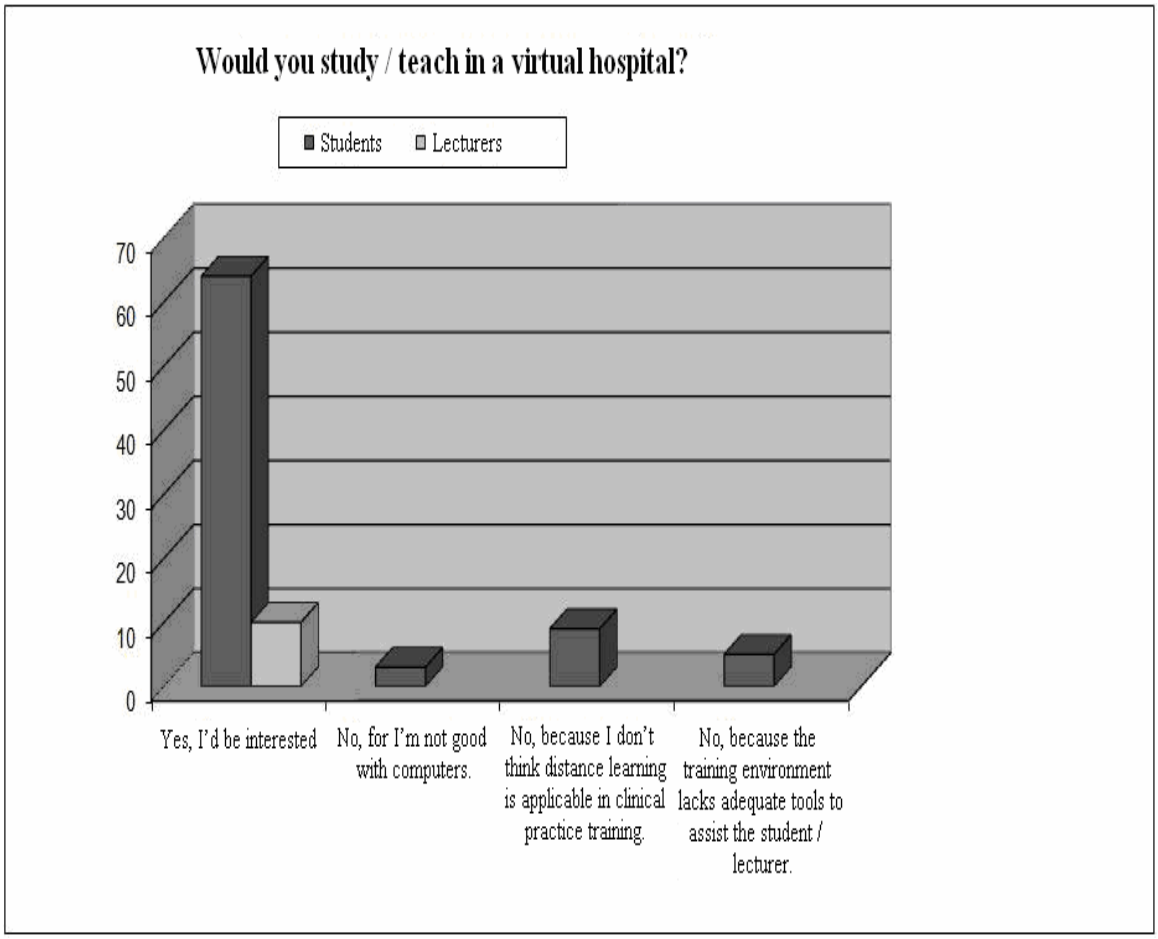
Would you study / teach in a virtual hospital?
Students
Lecturers
70
60
50
40
30
20
10
0
Yes, I'd be interested
No, for I'm not good with computers.
No, because I don't think distance learning is applicable in clinical practice training.
No, because the training environment lacks adequate tools to assist the student / lecturer.

Fig 3.

The pilot testing was conducted on the 12th of March 2009 with 12 third year students in the speciality "Nurse" taking part. A survey was carried out on the following questions: Do you navigate with ease in the software environment? Are the cases described easy to access and are they well-structured? Is the transition between the clinical case and the practice-teaching lesson easy and user-friendly? Are the lesson objectives clearly set and does the content of the lesson bring about their achievement? The diagram clearly shows that the answers are quite favourable.

SWOT-analysis: 40, fourth year girl-students over 20 from the speciality "Nurse" took part **(Fig. 4)**. All of them answered to the question: "How much practice have you had from the beginning of your study in the institute?", that they had had over 12 weeks of clinical practice.

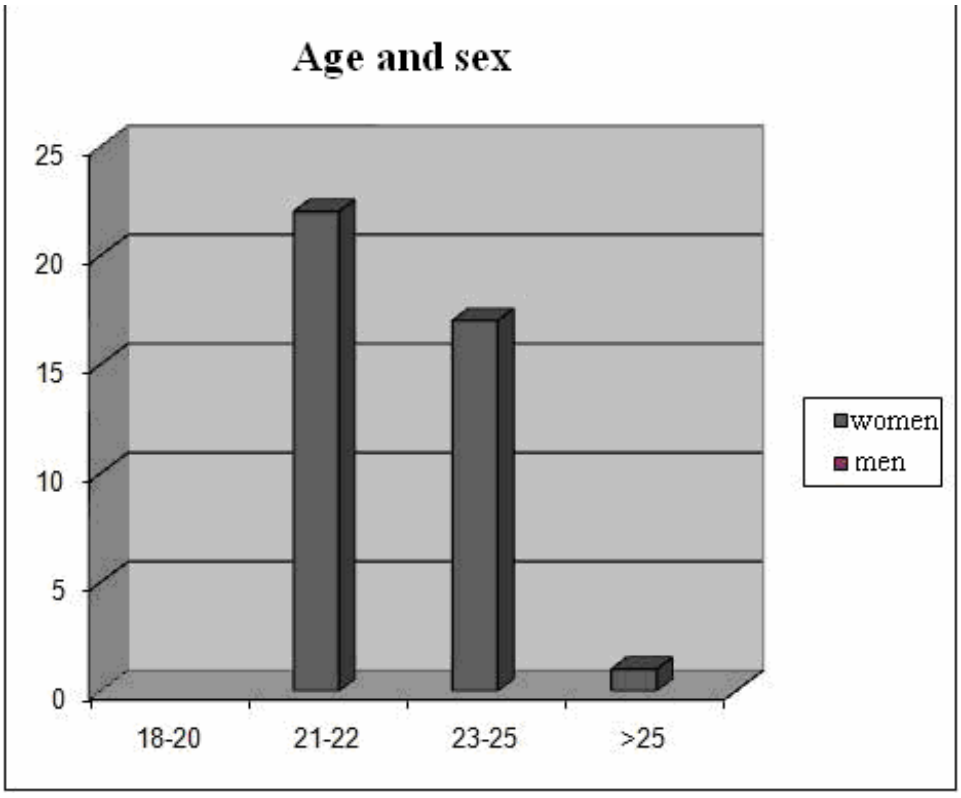

Fig. 4

The level of competence in clinical thinking, professional communication, use of computers and surfing the net was being studied. The answers included opinions like: I'm competent, I'm inadequately competent and I'm highly competent. No negative answers were given. The analysis also covered the ability to deal with clinical cases, where all the students answered that they were managing well with or without outside help and that they hadn't experienced any major difficulties or any at all. As regards the software and the technical part of the project most of the interviewed found them satisfactory. The analysis closed with the question: "How many different cases do you expect to treat with this software product in order to achieve high results at your level of clinical thinking and professional communication?" **(Fig.5)**.

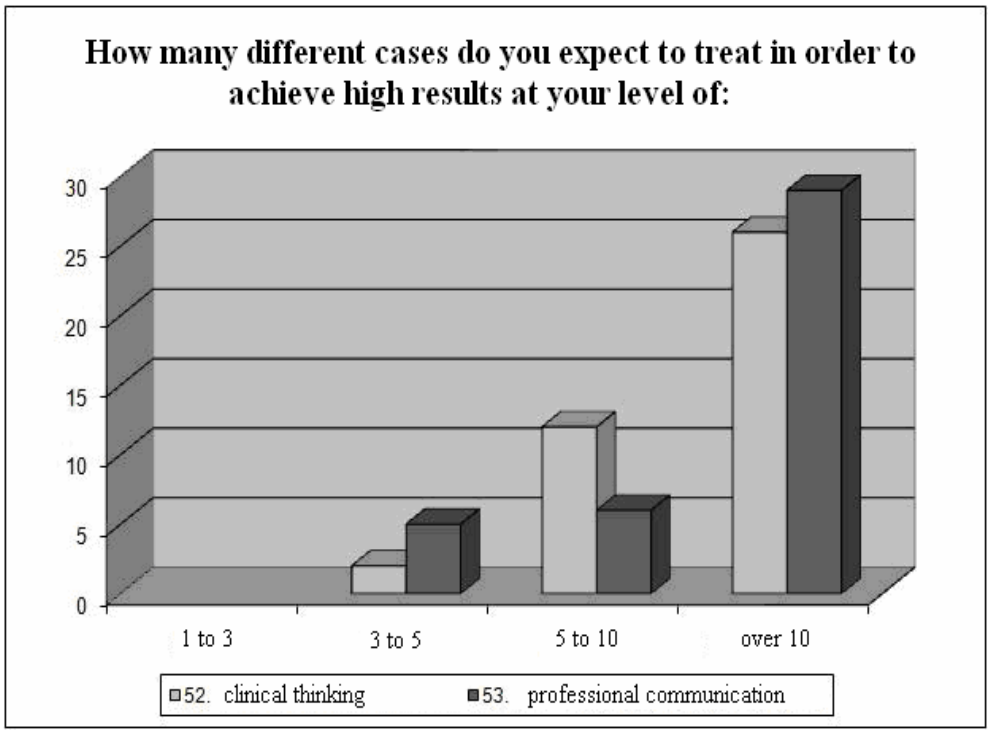

Fig. 5

CONCLUSIONS

The Virtual Hospital:

- Assists training in a limited hospital environment
- Enriches knowledge and experience in the study of nosologically marginal clinical cases
- Helps overcoming stress in real clinical environment

It offers:

- The opportunity for repetition of the new teaching material in the course of its study and acquisition - i.e. the students may repeatedly examine a particular clinical case in time suitable for them
- Easy access to the whole documentation regarding a particular case, necessary for the development of clinical thinking and the professional competencies
- Self-preparation and self-control that do not substitute training in real hospital environment but prove to be quite an effective pedagogical tool.

RECOMMENDATIONS

- Enriching the software environment with new clinical cases contributed by all partners in the project
- Working out e-lessons on particular cases
- Implementation of the Virtual Hospital in the basic and further education
- Encouraging students and lecturers to make use and implement innovative training methods in the field of TICE (Technologies de l'Information et de la Communication pour l'Education)
- Implementation of new teaching aids by the lecturers centered on the student him/herself
- Training highly qualified nurses not only from a technical point of view but above all in regard to their clinical assessment abilitie.