



INNOVATION OF COMPULSORY STUDY SUBJECT PEDIATRICS AND CREATION OF A MULTIMEDIA TEXT FOR PRACTICAL TRAINING

B.Ludíková, J.Potěšil, J.Zapletalová, L.Dubrava, H.Fögelová, E.Karášková,

E. Klásková, T.Malý, D.Pospíšilová, F.Kopřiva, V.Mihál

Department of Pediatrics, Faculty of Medicine, Palacky University Olomouc

Abstract

The medical faculty, University Palacky in Olomouc, is from September 2010 dealing with new ESF project titled "Innovation of compulsory study subject Pediatrics and creating multimedia texts for practical practice - Multimedia text of pediatrics." The project aims to modernize, increase quality, efficiency and advancement of student education at the University of Palacky in Olomouc - Faculty of Medicine and Faculty of Health Sciences. The aim of the project is an innovation of the existing system of preparation of students leading to greater awareness, flexibility and for independent decision-making that are necessary to improve their skills and erudition. Thus the project should create the necessary conditions for increasing competitiveness of the students in the labor market and ensure better care for pediatric patients.

Innovation of the Subject of Pediatrics is based on creation of missing in the creation of multimedia learning support (interactive, audiovisual), in the extension and change of content of practical training with the direct involvement of a child patient in teaching. Also the innovation is in testing the students where solution of these case studies will be part of exams and state exam. The project also provides the possibility of effective self-preparation of the student using the web interface and hypertext links to recent publications in reputable journals.

Working project team is currently developing an interactive, electronic, audio-visual teaching materials and case studies from these disciplines: Hematology, Surgery, Alergology, Pneumology, Endocrinology, Gastroenterology, Rheumatology, Nephrology, Intensive medicine, Cardiology and Neonatology, which are published and regularly updated on the Web www.pedkaz.cz website. The part of the presentation will also be the demonstration of work with this application.

Key words: study subject Pediatrics, innovation, e-learning, multimedial text, practical training



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The main objective of the project is innovation of subject Pediatrics at the Medical Faculty and Faculty of Health Sciences, Palacky University in Olomouc with the intention of improving the quality and modernize education of students in the subject of pediatrics, with the assumption of expanding their knowledge and skills. In line with new trends, in view of the medicine-evidence-based medicine - a new, ever-growing knowledge in pediatrics, it is necessary to modify and customize the subjects content in both theoretical and practical level, with an emphasis on linking theoretical knowledge, clinical skills and decision-making abilities. So far, such modernizing changes, that allow to students during their preparation, in wide range use of modern information technology, both in the classroom with a teacher, and in a separate education at home, had not been made. Now we put more emphasis on practical aspects of teaching students (at the bedside during the practical exercises), the ability of independent decision-making, training and skills gained on the involvement of multimedia learning support (in the practical and theoretical teaching - teaching becomes more interactive). The newly created multimedia learning support (multimedia textbooks, web interface) is based on individual solutions to specific case studies of pediatric patients, resulting in better decision-making skills of students and future graduates. Part of this study support are hyperlinks to recent publications in renowned domestic and foreign magazines. Students are able during the workshops to use new case studies of patients and practise their teoretical knowledge from lectures on real patient and consult their findings with doctors.

Processing of the case, according to this study support, will be part of the state examination for students of general medicine and pediatrics and part of the examination of the students of dentistry and physiotherapy. Another reason for the need of multimedia study supports in the field of pediatrics is that in the current study program completely lacks the necessary literature to acquaint students with specific cases of patients and their diagnostic and therapeutic solutions. In preparation of students, when compared with EU and abroad, our students lack the continuity of the practice, mostly in separate individual cases of patients. The aim of this project is to help offset this deficit. It often happens that students start in practice, and they lack the training, which the use of modern information technology can convey. The project began on 15th September 2009. It is solved in several stages.



Primarily the central data collection and visual documentation as a necessary basis for further processing quality materials. Data collection and information studies are conducted through the available literature and work with internet resources. The largest portion of the data collection phase took up field work. They were selected by suitable case studies from various fields, collected statements from medical records, outpatient card data was procured photographing and filming patients, of course, with the consent of patients and their legal representatives. There were also used results from a database of radiology clinics, including image documentation and lab results. All findings of each patient were consulted with other researchers, supervisors and project coordinator. Further, it was necessary to create a new computer program into which is possible to insert text created for case studies. The program is made up as editorial, due to gradually opening of windows with a description of each patient, the student enters his own assessment of the urgency of the patient, through description students make their own differential diagnostics consideration, according which they make selection of laboratory, imaging and other tests, where is included video and photo documentation. On the basis of these results final diagnosis and selection of therapy is made. To all the case studies is by specialist added theoretical informations and literature including internet links. The program has its own internet domain-www.pedkaz.cz and is secured with a password.

The next stage is to create own multimedia learning supports. As described above, study support is divided into anamnestic part - the patients input information, as well as the student decides on the need of hospitalization of such a patient, including the location in to the individual departments or outpatient care.

Next part is diagnostical evaluation of physical examination and diagnostic tests of the patient and the therapeutic part, where the student is indicating the treatment of choice for diagnosis. For each case study, the student has opportunity to obtain anamnestic data, which are individually described in sections - the current disease, family history, pharmacological history, social history, employment history, gynecological history, history of allergology, personal illness, status somaticus and CAVE. In addition, student has opportunity to select from many laboratory tests divided by according to examination of body fluids and radiological examination methods. Then the program provides possible five to ten disease diagnosis to choose the correct one. Therapeutic issues are also dealt with a choice of five to ten offered answers. After testing, student evaluation shows, with commentary on the mistakes and correct answers.



The last stage is the implementation of innovative teaching. A computer program is used during the practical training of students in the department, both in the test mode and in the student mode of teaching, when they at simulated case studies are given access to disease and patient with them. This is performed in the presence of an assistant, who discusses with students given disease and deals with the newly acquired information from domestic and foreign sources on this issue in the theoretical part of the program.

Conclusion

When working with the target group, it was found, that most students use the program during their homework and that the way of teaching is for them close , suitsble and they find it beneficial.