

## Teaching Literature Search Skills to Undergraduate Students of Librarianship at Charles University in the Czech Republic

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### Abstract

#### 1. Introduction

Ability to search the literature effectively is essential for both future clinicians and medical librarians to implement evidence-based practice. The librarians should be competent enough to teach these skills.

National medical library (NML) has been developing and organizing courses for life-long education of medical and health sciences librarians since 2010. In the Czech Republic, bachelor and master study programmes in librarianship and information science are carried out by Institute of Information Studies and Librarianship (IISL), Faculty of Arts, Charles University in Prague. In 2013 NML began to organize elective courses in medical information retrieval for IISL students. This course is known as „ Introduction to medical librarianship with focus on EBM“.

#### 2. Methods

Special attention is paid to different study designs, database selection, understanding PICO procedures and search strategy formulation. We developed an interactive e-learning module via LMS Moodle to help students understand and master individual course topics.

#### 3. Results

More than 70 percent of the students were able to fulfill the limits required to pass the course.

#### 4. Conclusion

When we teach biomedical information retrieval for further implementation in evidence-based practice we should always pay attention not only to theoretical principles of EBM but to practical searching skills as well.

*Key words:* information storage and retrieval; evidence based medicine; education; computer assisted instruction

### Introduction

Ability to search the literature effectively is essential both for future clinicians and medical librarians to implement evidence-based practice. The librarians should be competent enough to teach these skills.

Searching for information in the context of medicine and evidence-based practice requires systematic approach, particularly using all available resources. Moreover, it requires close cooperation between librarians and medical professionals with appropriate competencies, knowledge and skills.

NML has worked in the field of continuous specialized education of medical librarians since 2010 and in 2013 the range of all the activities was extended to the pre-graduate librarianship education too.

## Methods

Special attention is paid to different study designs, database selection, understanding PICO procedures and search strategy formulation. The courses are arranged in two parts (sections). Students spent 15 hours by face-to-face learning with hands-on training and 5 to 10 hours are devoted to self-studying. We developed an interactive e-learning module via LMS Moodle to support the self-study part of the course. The module is consisted of various types of learning activities including tests. Two of the tests are aimed at assessing the level of understanding of EBM basics, i.e. types of study designs and PICO formulation.

## Results

In the study types test (Fig. 1) 83 % of students in the first course and 77 % of students in the second course gained 6 or more points, that means that they were able to assign a proper type of study at least in three of five tasks.

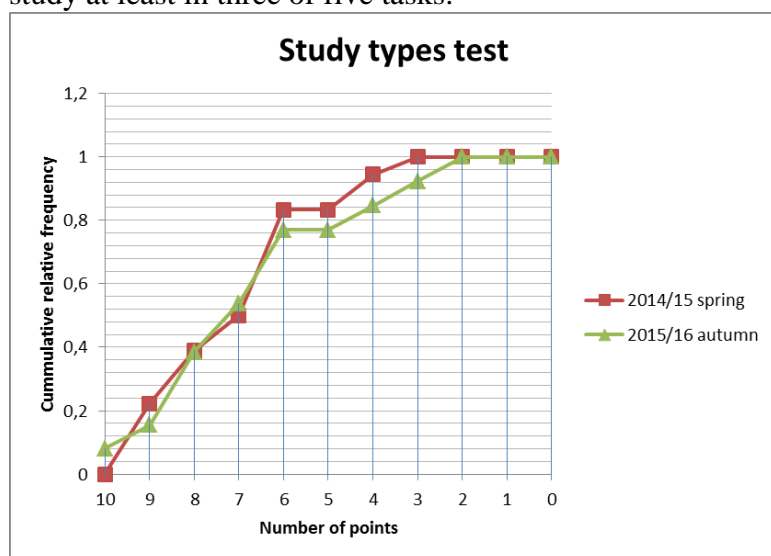


Fig 1. Results of the study types test

In the PICO test (Fig. 2) 94 % of students in the first course and 92 % of students in the second course gained 8 or more points. It means that from three PICO tasks, they solved two completely, or one completely and two partially.

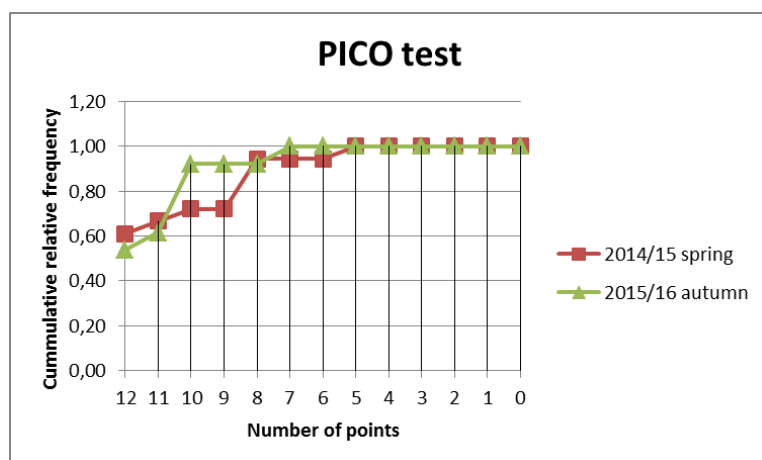


Fig. 2. PICO test

In comparison with the study types test, we can say, that better results were obtained in the search strategy test (PICO). Epidemiologic study designs are part of medical research that differs in its methods from qualitative research that is usual in humanities and social sciences.

### **Conclusion**

Decision-making processes in medicine applying evidence-based procedures are possible if there are both information systems (according to 6S) and information services available. In the framework of specialized education that exists, healthcare librarians should develop their appropriate competencies and knowledge.

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