EAHIL 25th Anniversary Conference, 4-6 July 2012, Brussels, Belgium

Award for the Best Oral Presentation

Librarian teachers on the move: are video tutorials an effective alternative tool for library information literacy instruction? A case study

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Abstract

The Ghent Biomedical Library research group has performed research over the last year on teaching information literacy in the Biomedical curriculum. The impact of a differentiated teaching methodology was studied in a framework of blended learning, with the first year university students acquiring information literacy competences. First year Bachelor students in Biomedical Sciences at Ghent University were asked to study video tutorials as a possible alternative teaching methodology to other educational formats. The EAHIL 2012 meeting offered the occasion to present two related items. Ann De Meulemeester presented "Self-efficacy tests are helpful in the acquisition of information literacy. A study in first year bachelor students." The results of this research laid at the base of "Librarians on the move", a new study concerning best practices regarding innovative teaching methodologies in information literacy. The preliminary results were presented in a question-based approach in dialog with the audience. This approach had the advantage of unlocking the potential within the audience, bringing them to reflect on their own teaching methods on information literacy. The article reflects on the presentation held at EAHIL, more detailed results will be presented later in 2012.

Key words: interactive tutorial; information literacy competences; information literacy instruction; blended learning; training methods.

Most relevant questions presented at EAHIL

Which challenges influence the teaching of "Information literacy competences"(ILC)?
An important challenge resides in the learning process of the students and the continuous changes in both context and content of ILC-teaching. The "contextuality" of the desired information literacy competences (ILC) is itself an essential acquisition as students in their future studies and careers will have to be constantly changing and adapting to the new demands of the knowledge society. Teacher librarians are therefore constantly "on the move" to find a reply to perpetual innovations.

Can we identify some particular changes which question the role and tools of the teacher librarian?
In the past "resources oriented demonstrations" were standard. In this methodology students were too often given answers to remember, rather than problems to solve. In the end students were left with a very poor idea on how to build a good research question and how to process it. Instead they learned essentially about the bibliographic treasures kept in the library. Gradually the idea arose that we should develop a profoundly different perception and understanding of the ILC competences to be acquired by the students. This change has been a catalyzer why teacher librarians are now so actively on the move towards newer teaching methodologies.

This change of perception was initiated by:
- *an increasing student population:* the person-to-person trainings in small groups had become almost impossible with the increasing student population. Information literacy trainings in the PC room for large groups (40 - up to more than 100 students) are becoming a standard in our faculty nowadays;

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- *an increasing awareness for the importance of ILC* within our faculty was responsible for a substantial raise in teaching and training time;
- *an increasing demand of customer tailored courses* adapted to specific learning paths and curricula.
- a competition of internet resources: which are 24/24 accessible and offer a variety of learning devices (webinars) to our customers. Unfortunately, the quality of those resources is not always identifiable by the customer.

These changes induced a higher workload to the reference librarians engaged in teaching. Leaving us with the question, how to cope with this workload given the limited staff. A substantial change in methodology was inevitable. Nowadays the Ghent ILC instructions are focused on processing content and academic skills, instead of showing off the library content. We try to teach as interactively as possible, with a substantial interest for monitoring the learning process and devices. To motivate the students and maximize the impact we favor continuous integration of ILC courses in each year of the curriculum, rather than limited trainings at the beginning of the curriculum. ILC acquisition should be embedded in other courses and focus on integrated topics to optimize the students motivation. This implies that we have to collaborate with other teachers and are nolonger the only responsible in charge for ILC. Different assessments are administered during and after the courses. Due to these, the students as well as the teachers, can track their own advancements and engage themselves in self-assessing their progress and its benefits.

Gradually we realized the importance of the differences in the learning styles of the students. Literature research indicates that "How we learn is individually different, sustainable effective education takes as much as possible these differences into account". (Dumont H., 2010-OECD) The possibilities of multimedia devices, to support a sustainable learning process, are easily present and accessible in today's society and learning environments. Therefore it has never been easier and difficult at the same time, because of the abundance of possibilities, to take differences in learning styles into account and to provide differentiated "personalized" trainings.

How can teacher librarians meet these challenges and help users to achieve higher ILC?
If we want to prepare our students to be the professionals of tomorrow in a fast moving knowledge society, we not only have to equip them with a backpack containing the necessary tools but we must also work on

their self-efficacy (a good perception of their own level of performance) so they are able to cope with the information overload, which is a necessary step on the path of lifelong learning and professionalization. We try to support this idea in our teaching methodology by a conscious awareness for:

- the teaching methodology and interactivity: activate, motivate, level differentiation, continuous training, differences in learning styles, research on these topics;
- the IL competences to be achieved rather than showing off information resources offered by the library;
- implementing innovation: through integrating and blending new competences and devices as video tutorials, voting systems and ally with web tools rather than compete with them.

What is this study about?
The acquirement of ILC, through the use of video tutorials, was studied within a setting of blended learning while using a variety of other active learning tools and formal information literacy instruction (ILI) in a classroom environment. The curricular course consisted of 15 hours of theory and 15 hours of practical training on PC. The digital learning environment was used to communicate with the students, to provide learning materials and to perform digital assessments. The final study cohort consisted of 141 students, which were divided into two practice groups (a test group and a control group).
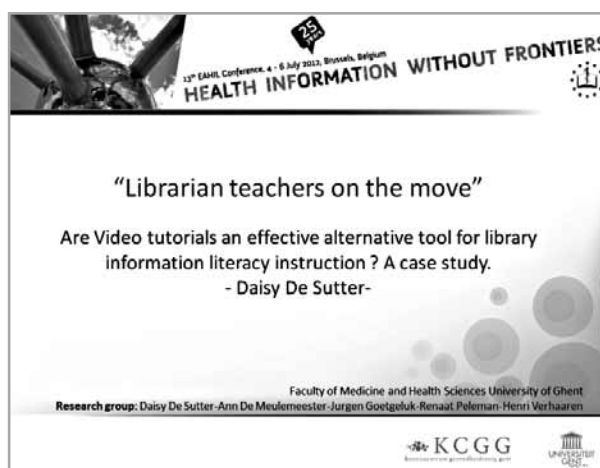

Fig. 1. *The presentation's opening slide.*

The studied interventions were:
In October 2011 test group 1 received a self-study assignment on PubMed using a selection of online video tutorials. The control group 2 received a hands-on and

example guided instruction by the information specialist. Immediately afterwards a self-assessment test was administered to both groups. In December 2011 a cross-over with a similar division of the groups was applied. Group 1 became the control group and received formal ILI on Web of Science with an example guided instruction by the information specialist. Group 2 in this setting the test group, was engaged in a self-study with a selection of video tutorials on Web of Science. Again, immediately afterwards a self-assessment test was administered to both groups. In the theory course, students were activated by the use of voting devices. Finally, self-assessment tasks, which were provided on the digital learning platform, allowed students to keep on training and track their progress.

Are video tutorials useful to the information literacy instruction of large groups?
Preliminary results indicate no substantial differences in the learning outcomes between both groups, although a more profound statistical analysis still has to be performed. We became more convinced that video tutorials are a possible alternative for ILI in large groups. Within a blended learning environment the information specialist should be able to design and use a diversity of tools which leads towards sustainable education.

Are video tutorials, as active learning device, better suited to acquire ILC's?
We can be positive about the fact that video tutorials can be used in large groups of students to bring the whole group of students to a similar basic level, and to limit rehearsing in formal courses. To combine the best of both worlds the students are set off with the self-study assignment with tutorials to acquire basic searching skills. In formal courses we remediate on problems and train the more advanced skills in an example-guided instruction. Because the students in these formal course, started on an approximately equal basic knowledge level, the progressing speed afterwards turned out to be higher.

What is the impact of our findings on the role and the competences of the teacher librarian and in particular on our personal teaching methodology?
The consequences of our study have an impact on the educational methodology in information sciences, as well as on the role of the information specialists within training as for the design of educational tools. A blended learning environment with differentiation of methodology can be an important asset to a sustainable information literacy instruction, which aims ILC's as high as possible among our students. The competences of the teacher librarian must be equally and constantly developed to cope with this evolution.

Do we possess the "magic recipe" to make the perfect blend?
We stay on the move towards integrating new content and innovative devices in our methodology. Educational research is a continuing feedback and change process. Like every blend it needs to be processed, reshaped, reblended and matured over the next years. Reflecting on this with the audience at EAHIL we realized that most of us are struggling with it in the same way and many centers start performing research. Through this presentation we hope to inspire all librarians engaged in teaching, to reflect on the content and the process, in order to achieve higher learning outcomes on ILC among their students. This is a first step towards self-efficacy when processing information, lifelong learning and up-to date professionalization.

Some personal thoughts to conclude
Being a EAHIL first timer I came to the congress without any expectations and without knowing anybody. Now I look back on it with warm thoughts and wish to thank especially all of you who encouraged and stimulated me to continue this research work. Thanks EAHIL for great networking possibilities, a positive interchange climate, opportunities for triggering discussions with peers and for giving me such a great boost! I hope to meet you all again sometime on a next EAHIL event.

References
1. Anderson K, May FA. Does the method of instruction matter? An experimental examination of information literacy instruction in the Online, Blended, and Face-to-Face classrooms.
   The Journal of Academic Librarianship. 2010;36(6):495-500.
2. Croft WM, Mihaly EC. Responding to student needs: Trailing a "blended environment". In: OLT-2005: Beyond Delivery; 2005 September 27th; Australia, Queensland University of Technology, Brisbane, Queensland. [cited 2012 Jan 19].
   Available from:http://eprints.qut.edu.au/archive/00002195/01/OLT_conf_papr.pdf
3. Dumont H, Istance D, Benavides FG. The nature of learning: using research to inspire practice. Centre for Educational Research and Innovation: OECD Publishing; 2010.