Methods to implement new information technologies for teaching Information Literacy

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Abstract:

The authors, with a particular experience in coordinating and participating in international projects aimed at developing the institutional capacity of higher education, will share their experience with the introduction of training masterclasses on the use of knowledge and interactive teaching technologies using Kahoot and Hypersay.

Kahoot, https://kahoot.com/ is a game-based learning platform.

The authors also used Hypersay training, https://hypersay.com, a software that transforms PowerPoint presentations into active communication and active partnerships with students. These methods are new and innovative, and the authors will present drafts of how to achieve the digital content of Hypersay and the Kahoot evaluation.

The authors will also show some experiments with e-learning for library users, but also for librarians and other members of staff. The self-developed e-learning programs for library users (mainly students) include https://www.uib.no/en/ub/79503/how-use-ebooks and several videos on how to use the library system for patrons: https://www.uib.no/en/ub/121564/how-search-oria. The main electronic resource is Search and write (www.sokogskriv.no/en/). In the paper we will present the results of interviews with the creators of the videos and the management team, where they describe the strategic reasoning for e-learning, and also the pedagogical ideas underpinning the efforts. The models used can be multiplied and for any and all practitioners in the field.

Keywords: Information Literacy, Kahoot, Hypersay, gaming, pedagogical, new technologies, Romania, Norway
INTRODUCTION

The impact of new technologies influences and differentiates the pedagogical models used. Information Literacy, a fundamental discipline in the basic training of any student in every field, is a dynamic discipline, adapting to new technologies. Students should engage in transferring knowledge and acquiring skills through integration, active participation, critical thinking development and the use of new access, writing, and communication technologies. It is the best method to turn PowerPoint files into engaging presentations featuring real-time interactions with audience. The authors will present a case study of the Information Literacy course held in this format, with real questions and answers.

The authors also used Hypersay training, https://learnfwd.com/hypersay, a software that transforms Power Point presentations into active communication and active partnerships with students.

The authors will also show some experiments with e-learning for library users, but also for librarians and other members of staff. The self-developed e-learning programs for library users (mainly students) include https://www.uib.no/en/ub/79503/how-use-ebooks and several videos on how to use the library system for patrons: https://www.uib.no/en/ub/121564/how-search-oria. The main electronic resource is Search and write (www.sokogskriv.no/en/). In the paper we will present the results of interviews with the creators of the videos and the management team, where they describe the strategic reasoning for e-learning, and also the pedagogical ideas underpinning the efforts.

Members of the library staff are also encouraged to use the University of Bergen e-learning platform (the majority of courses are in Norwegian). Here, the academic staff and librarians can learn (among other things) how to make e-learning courses. In the paper, we will present the pedagogy behind the course, and the responses from a survey among “teaching librarians” where they were asked about their experiences and evaluation of this course.

The models used can be multiplied and for any and all practitioners in the field.

LITERATURE REVIEW

New communication technologies are now learning environments. We can call them learning environments based on communication technologies. If we also consider pedagogical methods, the concept would be more complex: learning approaches based on communication technologies, DGBL-Digital Game-Based Learning.

We learned about Kahoot at one of the sessions of QQML-Qualitative and Quantitative Methods in Libraries, Paris, France, 2015. A workshop was organized and the participants participated in an assessment test of the knowledge learned at the end.
It was the beginning of the introduction of Kahoot-based testing into the pedagogical practice of teaching the Information Culture course.

Hypersay is https://hypersay.com/ an educational platform where Power Point presentations become interactive in the sense that students interact during real-time presentation with instructors. (Hypersay, 2019) This tool, we first encountered at the Research Conference in Romania, Iasi, 2018.

Digital Game Based Learning (DGBL) is increasingly used in education as a consequence of the existence and availability of these games and the use of contemporary users. (Bawa, 2019).

In order to institutionalize and adopt DGBL in higher education, it is important to study how the use of them in higher education courses can influence learning experiences and help students learn. (Epper, Derryberry, & Jackson, 2012).

Educational games and game-based student response systems (GSRS; gamification techniques integrated into student response systems) both increase a lot student motivation and engagement (Barrio et al. 2016; Wang and Lieberoth 2016).

Kahoot! is a popular eLearning tool that can easily be used to add vitality, student engagement, and meta-cognitive supports to higher education classrooms with limited instructor or student training required (Plump and Larosa, 2017).

Kahoot! like other response systems can be used to drill facts, but the setup of the program allows for students to learn new skills through solving problems (Wang, 2015; Dellos, 2015) and gives professors immediate feedback on the level of the students.(Asa and Gunn, 2018).

The use of Kahoot increased students’ focus and task behaviours. The results of student satisfaction research showed that, the students liked playing Kahoot and found it easy to use. (Bicen and Kocakoyun, 2018).

It is plausible that integrating GSRSs in lectures to test and teach students’ course knowledge will increase their engagement and learning and increase on-task mobile use behaviour (Licorish, 2017).

Hypersay has not yet been written in the literature. Through this platform we manage to load our presentations in the cloud.

Upload PowerPoint slides, PDF’s or Google slides and organise all ours presentations follow the steps (Fig.1):

![Fig. 1 Hypersay steps to make live presentations ppt](image-url)
RESEARCH METHODOLOGY

In the course of the Information Literacy Course, the Medical Engineering specialty from Transilvania University of Brasov, Romania, Product Design and Environment Faculty, specialty uploaded the course in the Hypersay platform. (Fig. 2)

![Hypersay presentation, first slide](image)

Fig. 2: Hypersay presentation, first slide (Communication/Information Literacy, Laboratory 4, First year MT-Mechatronics, OPTO-Optometry, IMed-Medical Engineering)

There were 35 students attending the Hypersay session via the MENEC code, [https://hypersay.com/s/MENEC](https://hypersay.com/s/MENEC). They made up a nickname.

Hypersay allows the creation of questions or small tests during the presentation.

The students took a Kahoot test attached to Hypersay's first slide, the test was called Information Literacy Test, with 16 questions. (Fig. 3)

![Kahoot Information literacy test](image)

Fig. 3: Kahoot Information literacy test, [https://create.kahoot.it/share/cultura-informatiei-test-1-2017/d172a286-a2ea-43f6-a3d4-4426217f777a](https://create.kahoot.it/share/cultura-informatiei-test-1-2017/d172a286-a2ea-43f6-a3d4-4426217f777a)
After completing the test, they responded online to the Hypersay platform on 3 closed questions and 2 open questions.

RESULTS ANALYSES

Question 1: Kahoot is a learning platform based on gaming. Do you think is it useful in learning process?

![Fig.4: Hypersay presentation, question 1](image)

33 responses were positive, none negative, none unsure. (Fig. 4)

Question 2: This procedure helps in knowledge learning?

![Fig.5: Hypersay presentation, question 2](image)

34 students agree with fact that this way helps in fixing the knowledge. (Fig.5)

After completing the interactive presentation, students also answered the question 3. (Fig. 6)
Question 3: What is your opinion about this knowledge testing model?

The answers were very positive:

”I think that it is a very good method to memorise information and funny”

"It is an interesting way to assess knowledge by gaming and wakeup competition spirit”

"It is efficient when we repeat the questions to fix the knowledge”

"It is very good and modern”

Question 4: If these technologies would be introduced to all disciplines, would higher education become more attractive?

11 students strongly agreed, 14 students agreed and 6 were neutral. (Fig.7)
Question 5: What are your teaching preferences for your generation?

The answers were very enthusiastic:

“The appropriate preferences for my generation in teaching subjects would be tests / games ... more attracted, helping you to read more easily information.”

“Teaching electronically can facilitate learning and can be ... understanding and developing the student's speaking and speaking abilities.”

“Presentations, power point presentations, online, but also classical teaching methods, so that by both possibilities a balance can be created.”

“Teaching needs to be as interactive, as many ... so it would appreciate a lot more applications.”

“Teaching has to be as interactive and fun as possible.”

“Appropriate teaching preferences: online tests, virtual games, quiz ...”

“A way of teaching that involves the student, to be ... much easier would be more beneficial to the current generation.”

“The teaching preference for my generation must be fast ... and preferably electronic.”

“I would like the teaching methods to be more interactive, ... practice. For this, platforms like Hypersay could be used.”

“The students began to get to know the technology much better and ... more often and introduced as much as possible in the life of the students.”

“Learning shortly all the necessary information.”

“Interactive teaching, - Teacher to be involved in the process - to the students, culminating in their distraction from the subject presented.”
"Brainstorming: interplay.”

TRADITIONAL E-LEARNING COURSES, SOME EXPERIMENTS

In the early 2000’s, the academic sector not only had to cope with the growth of ICT, but also the implementation of the Bologna process, the rise in lifelong learning and widening of access to higher education bringing in new learners with different previous educational experiences. This became a new force for change in the academic library world.

The University of Bergen library has always given library trainings, but the content of the trainings differed. As seen from the library annual reports, in the 1990’s and early 2000’s the content is mainly library usage: How to find information through tools, catalogues, and databases. In 2003 the concept “learning centre” is first mentioned, and the discussion goes on to “the digital library” and that trainings in information literacy are needed.

Among the academic librarians, who all had (the equivalent of) master’s or doctoral degrees in university subjects, (not library science) the shift from library trainings focusing on tools to the needs in the informational society brought major changes in pedagogical conceptualization. Thus, the didactic activities to a higher degree are determined by the learners. The activities should vary and be produced in small and heterogeneous groups, based on mutual support. Productive learning and problem-solving learning are the main focus, trying to integrate theory into practice and encourage the transfer of knowledge and skills from one discipline to another (Voogt, J.M., & Pelgrum, W.J., 2003).

The constructivist and post-constructivist perspective on learning puts the transfer of knowledge and skills from teacher to student in a second plan, emphasizing the active role of the pupil / student in their own development of knowledge and skills. We are talking about a new perspective, which places learning in a process of co-participation. The new vision of learning (Situated learning), explore the situational character of human understanding and communication (Popa, D., 2013).

In 2007 the module-based web-course “Søk & Skriv” (Search & Write) was launched, developed in collaboration with the academic libraries at the University of Oslo and Bergen, the Bergen University College, NHH Norwegian School of Economics, and Aalborg University in Denmark (www.sokogskriv.no/en). The idea behind the development of the web-course was to develop good models for academic writing combined with tips for better searches. What characterizes writing as a good academic artisanship, and how students, through methodically reading of text, may gather information and use this in an ethical way in their own texts.

In the continuing development of «Søk & Skriv» the library has passed from a focus on theories behind search to directly showing how a student, through planning of the search operation may have a better basis for finding the needed information. The web-course presents searching as a systematic operation, and the students say that they are well helped when it comes to search, and the information source examples are plentiful and concrete (Kavli et al 2014:25)
The library has also experimented with self-developed e-learning programs for library users (mainly students) including “how to use e-books” https://www.uib.no/en/ub/79503/how-use-ebooks and several videos on how to use the library system for patrons: https://www.uib.no/en/ub/121564/how-search-oria.

The University of Bergen library, like other academic libraries, registers the change in how the university teaches. Students come from an interactive learning environment in secondary school and expect learning at the university to be similar. Among university pedagogues, the traditional classroom or auditorium form of teaching is generally criticised and considered too passive. Often, digital learning forms are easier to make more active. One example given by Pål Steiner at the library is that in many digital tools it is easy to anonymise the responses, and they are also open for a lot more responses at the same time. This way, the threshold for responding is lowered. He connects this to an ongoing debate in the local newspaper (and elsewhere), where female students are challenged to be more active and letting their voices be heard. The anonymity of digital tools should support this, he suggests (Steiner, 2019).

Also, the multitude of tools and the variety in them are also considered a boon by Pål Steiner. It is possible to spontaneously adapt to the level of knowledge, both pre-teaching and as the teaching session goes on. This also makes it possible to “flip” the teachings, by using digital tools both before and after the actual meeting with students (Steiner, 2019).

From the early start in 2007 with Search and Write, the Library has been part of the educational experimenting network in the University of Bergen. The university promotes innovative education and has its own prize for this. The Library, in collaboration with an academic department, were the recipients of the prize in 2014, and is still participating actively in the overall digital education endeavours in the University.

Within the Library, the staff is motivated to plan their teachings for students as actively as possible. It is of course different how much time and effort the individual academic librarian dedicates to develop their teaching. As it is, the Library is organised in sections, and one section is “Education and research support”. The section is divided in teams, and Pål Steiner is head of the Education support team. He mentions workshops in planning of teaching events as a tool for motivating teaching librarians to use an active approach. The Library has also participated in externally funded Nordic development projects and has benefited from the possibility to dedicate resources to this work. The Education support team regularly discusses best practices and tips and tricks in their meetings and uses the “Teams”-channel for questions and advice (Steiner, 2019).

After one of the workshops in planning of teaching, a small evaluation survey was conducted, and evidently, one of the effects of the working together was that all respondents had changed their teaching after the workshop, even though several also mentioned that they did not find the workshop method very useful (Steiner 2019).

**DISCUSSIONS AND CONCLUSIONS**

Students particularly appreciate these technologies. Interactivity, the use of questions that stimulate their thinking are much more attractive. The answers to the question about their
preferences for the accumulation of knowledge in a fun and easy way underscore the unanimous acceptance of these technologies. We confirm that in terms of practitioners’ implications, “instructors should look to DGBL interventions as tools that can potentially increase engagement to a point where performance is positively impacted.” (Bawa, 2019)

“Interactive teaching. - Teacher to be involved in the process - to the students, culminating in their distraction from the subject presented.” said one student. We confirm that” Kahoot! has changed the classroom environment. The students are no longer passive.” (Asa and Gunn, 2018)

“Presentations, power point presentations, online, but also classical teaching methods, so that by both possibilities a balance can be created” said another student. We confirm that generally, we use Kahoot! as a ”supplemental teaching tool in classes no larger than 30 students, approximately once a week, and for about 15 minutes.” (Plump and Larosa, 2017)

All modern academic libraries need to develop their staff training systems in order to keep up with the students, who are used, from secondary school, to more active learning forms. This can be done through project work with external funding, or by workshops for the teaching librarians. Here, they may inspire and support each other. Teaching is one of many tasks for an academic librarian, and motivation and inspiration is necessary.

References


Steiner, Pål (2019): Personal communications 24.05.2019
