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Information Seeking MOOCs at the University of Helsinki: Interactive and Integrated

Best practice article

Taina Kettunen*, Kristina Weimer, Valtteri Vainikka, Pävi Helminen

Helsinki University Library, Finland

Abstract

The University of Helsinki is a multidisciplinary university with about 31 300 degree students and 7800 staff. Our Bachelor's and Master's degree programmes were recently redesigned and started off in the autumn semester 2017. This led to the reorganization of the information literacy teaching at the Helsinki University Library in order to be able to connect with larger amounts of students.

In autumn 2017, we launched two new MOOCs: a Finnish language one for the bachelor's level and an English version mainly for the master's level students. The MOOCs are currently compulsory in some study programmes and voluntary in many others. Our main goals were to make the MOOCs as interactive as possible and to collaborate with departments to get these courses integrated into their curricula at the point when students need these skills the most.

This article discusses what we have learned during the process of constructing MOOCs and how we tackled the main challenges of meaningful content, integration and interaction. Our MOOCs are in continuous development based on received feedback.

Keywords: information literacy, information seeking courses, MOOCs, distance learning, interactive courses, integrated courses, teaching

***Contact:**
e-mail: taina.kettunen@helsinki.fi

Background

University

The degree programmes at the University of Helsinki were recently redesigned resulting in 32 bachelor's and 61 master's programmes. Of these master's programmes 35 are in English. There are also four doctoral schools with 32 doctoral programmes. The first students in these new programmes began their studies in autumn 2017. The 11 faculties of the university act in four campuses with about 31 300 students and 7 800 staff.

The strategic plan of the University of Helsinki (Strategic Plan of the University of Helsinki 2017–2020) strongly emphasizes open science, interaction and learning in the scientific community and digitalisation. A roadmap for the digitalisation has been prepared (Digitalisaatio-ohjelman työryhmä, 2018).

Library

Helsinki University Library (HULib) offers information literacy (IL) support for all study programmes. We give support and teaching online and face-to-face, but there is variance in how our teaching is organised in different study programmes and on different campuses.

At the University of Helsinki, there have been compulsory and/or voluntary online courses on information seeking since 1996. There have been various technical solutions and different ways in how these courses integrated into curricula. None of the previous courses have been a MOOC, although some courses have been massive (Student´s Digital Skills) or the materials open.

The education reform had an effect on the IL teaching services at HULib. Formerly, the IL teaching had been mainly arranged as face-to-face teaching for small student groups of 10 to 25 students. As the number of teaching librarians were diminished, some rearrangements of our IL teaching were inevitable. It was a challenge to ensure that all students have the necessary IL support available. MOOCs are one effort to tackle this challenge (Table 1).

Table 1.
Information literacy support by Helsinki University Library for Bachelor's and Master's degree students during the semester 2017–2018.

<table>
<tr><th>On the web</th><th>Contact teaching and support</th></tr>
<tr><td>During the first year Student's Digital Skills (MOOC before MOOCs) – 3 ETCS (information seeking is 1/6 of the course)</td><td>Library tours for first-year students (tutors run the tours, the library helps with the planning)</td></tr>
<tr><td>Bachelor's studies Tutkielman tekijän tiedonhankinta (MOOC)
Informationssökning för avhandlingsförfattare (MOOC)</td><td rowspan="2">Integrated face-to-face teaching for some study programmes (e.g. 1 x 90 min)</td></tr>
<tr><td>Master's studies Information Seeking and Management for Thesis Writers (MOOC)</td></tr>
<tr><td colspan="2">Open courses and counseling workshops during semesters
Cooperation with other units</td></tr>
</table>

What MOOCs

The term MOOC for a Massive Open Online Course was first used in 2008 for a course designed by George Siemens and Stephen Dowens (e.g. Cormier, 2008). In brief the number of participants in a massive course are not limited, the courses are open (but not necessarily free) to anyone and can be accessed online at any time.

MOOCs have since then developed in two main paths with many modifications (see e.g. O'Brien, Forte, Mackey, & Jacobson, 2017; Pomerol, Epelboin, & Thoury, 2014):

- cMOOC (focus on community of learners, social learning, places great emphasis on social networked learning, learning is mainly through peer interaction)
- xMOOC (self-directed learning practices, emphasize individual learning using automated assessment tools, aim to reach massive numbers of learners, at any time and from any place)

The goals of MOOCs are diverse: from teaching basic skills to professional development, offering certificates when completed or serving just as platforms for content and materials to be picked up as needed. Typically, the majority of the participants of a MOOC do not complete the course in the way they are supposed to, but they may still feel successful and the MOOC fulfils their expectations for one reason or another (Stephens & Jones, 2014).

Why MOOCs

At HULib the education reform, strategic plan and many practical reasons led to the idea of increasing our online education. The university already had a Moodle platform for learning, but a new MOOC platform, Moodlerooms, had just recently been acquired and the first MOOCs were launched.

Some of the library's IL courses used Moodle, but those were for restricted groups of students. Because the number of teaching librarians was limited, it was not possible to check the assignments of massive student groups or give individual feedback and support. Besides, there was actually no reason to restrict the participation in the course only to the students of the University of Helsinki. Although it would have been possible for anyone to visit as a guest in Moodle, we decided to open our course even more and to use the MOOC platform. Our main goal was to improve the quality of the IL teaching and to make the courses more accessible.

According to Liu, Kang and McElroy (2015) when compared with face-to-face or other online courses, the MOOC experience of students was better especially because of the flexibility, new learning experience and the quality of course materials. Negative aspects included unorganized course structure and lack of feedback.

Production Process

The Student's Digital Skills online course is the first information seeking course for the new students at the beginning of their studies and is a prerequisite or at least recommendation before the MOOCs. The MOOCs are more focused on information seeking and management for the writing process of a bachelor's or a master's thesis.

During the spring and summer 2017 a team of teaching librarians planned and created information seeking MOOCs in Finnish and English. Active student members of the library boards helped to recruit additional students to help with the planning process. The group

brainstormed ideas and comments on a Flinga interactive board. These students also created a Facebook discussion group called Helsinki University Library Fan Club. We greatly benefitted from and are thankful for their feedback.

The bachelor's level MOOC ("Tutkielman tekijän tiedonhankinta" in Finnish) and the master's level MOOC (Information Seeking and Management for Thesis Writers) were launched at the beginning of September 2017 as beta versions. These courses are licensed under Creative Commons Attribution-NonCommercial 4.0 and can be found at https://mooc.helsinki.fi.

The content is rather traditional IL material. With "open science" being the current trend in the university world, we have made an effort to include this type of content. It was often a significant challenge to ensure that this content was relevant enough to learners who came from different study fields and had varying entry level skills.

How to rate how much time is needed to complete the course by an average student was challenging. The estimated or recommended completion time was 27 hours, but many students performed the tasks more quickly.

In the first autumn there were several technical issues with the MOOCs because of potential bugs or instability in the technical platform itself. Since then various updates to the platform have improved both its stability as well as made it more user friendly. Especially the navigation within the site has improved.

We also noticed that making clear and unambiguous instructions and requirements – for both the students and teachers – is really important, even though many just skip the instructions in the beginning. Due to this we noticed it to be helpful to repeat certain instructions several times in order to avoid confusion.

Integration to the Curricula

Online teaching is not a new thing and MOOCs are not a novelty any longer. Our main challenges however are still how to integrate the MOOCs into curricula in a meaningful way and provide our IL support in a timely and relevant manner.

Some of our IL teaching had already earlier been integrated into the curricula in various ways in different faculties and departments. We spent some time engaging busy departments and convincing them that this MOOC is worth their time.

The MOOC integration was usually with the bachelor's seminars or scientific writing courses, in a way mostly comparable to earlier face-to-face IL teaching integration (Table 2). While information seeking and management skills are especially needed when writing a thesis, sometimes the study programmes may have to choose some other timing due to various practical reasons.

Students completed the MOOC course by writing an information seeking and management plan after they had read the texts and done the exercises. The submission of the plan was usually redirected to the Moodle areas of the seminars, where the teachers – not the librarians – could check it. The completion of the MOOC was usually just one part of the whole seminar.

MOOCs are integrated into curricula in some faculties and voluntary in most of them (Table 2). Different systems in different faculties can nevertheless be confusing for both the

students and the teachers. The English master's MOOC was not compulsory and therefore it was used much less than the Finnish one.

Table 2.
Role of bachelor's level MOOC in IL teaching in 11 different faculties of the University of Helsinki during the semester 2017–2018.

Compulsory in the whole faculty	The faculty checked the answers	Faculty of Law
	The library checked the answers	Faculty of Theology
Compulsory for some majors in the faculty	The faculty or the library checked the answers	Faculty of Arts Faculty of Science
Voluntary	Recommended as a self-study material during the face-to-face teaching	Faculty of Educational Sciences Faculty of Social Sciences Faculty of Agriculture and Forestry Faculty of Biological and Environmental Sciences Faculty of Pharmacy Faculty of Veterinary Medicine
		Faculty of Medicine

Interaction and Feedback

Interaction between the participants or even between the material and the learner is a huge challenge. Our MOOCs do not have any starting and ending dates and there is not a group of students who would do the activities at the same pace. The tools we used for creating the assignments have options of instructive feedback. The assignments are automatically checked and the student has immediate feedback on their performance.

The discussion forum on the MOOC platform was hardly used by the students. Most of the contacts took place via contact form or email. The help that was needed mostly consisted of practical or technical matters, not the contents of the course.

Filling out the feedback form was voluntary. 43 out of 401 (11 %) registered students gave feedback and 34 (79 %) of them gave their consent to use their answers in research. Generally the students were quite satisfied with the course (Fig. 1). The quality of course material and usefulness of the course content were also found rather positive (Table 3). Text feedback revealed dissatisfaction with navigation and technical issues.

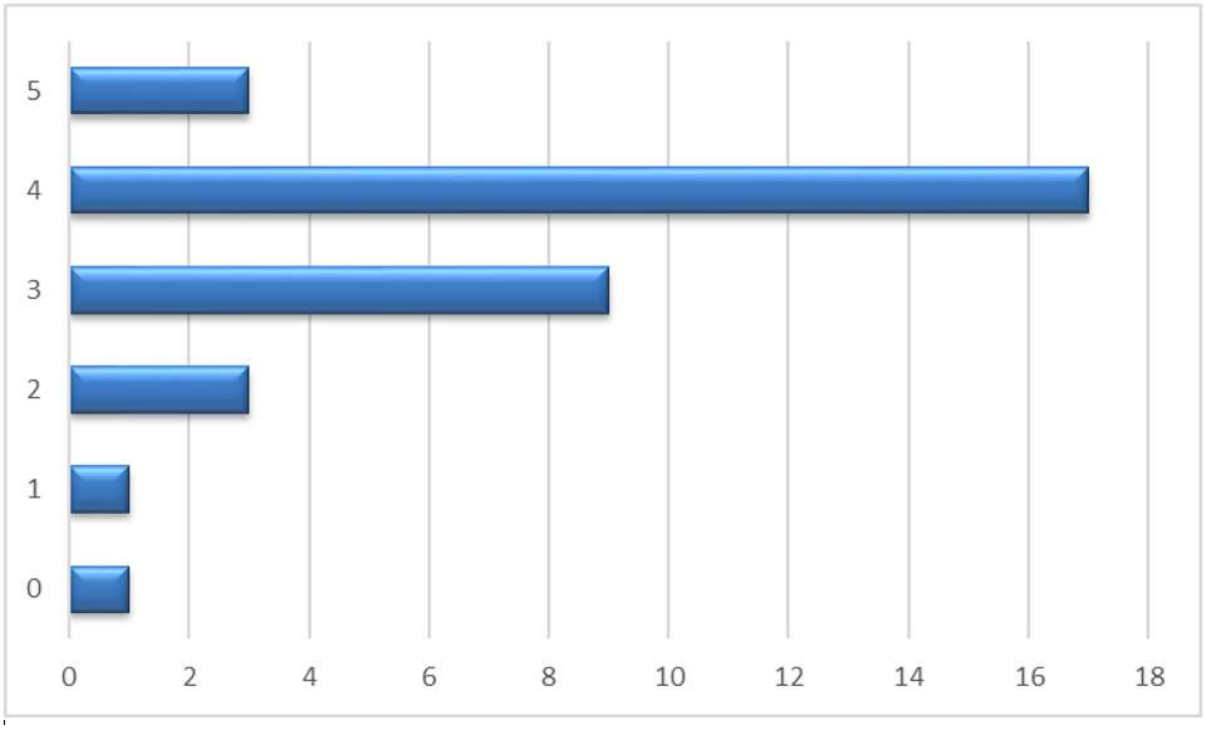

Figure 1. General assessment on the course performance (rating on scale of 0 to 5, where 0 is poor and 5 is very good) based on students' (n=34) feedback on the bachelor's level MOOC (Tutkielman tekijän tiedonhankinta) during the semester 2017–2018.

Table 3.
Experience on the course performance based on students' (n=34) feedback on bachelor's level MOOC (Tutkielman tekijän tiedonhankinta) during the semester 2017–2018.

	Neutral %	Disagree completely %	Somewhat disagree %	Mostly agree %	Fully agree %
The course material was clear and well designed	0	3	6	62	29
I found this course useful	0	0	6	26	68

Future Plans

Good design and structure of MOOCs as well as interaction is especially important in keeping the students motivated (see. e.g. Deshpande & Chukhlomin, 2017; Liu et al., 2015). After the first year it was necessary to make improvements in both the content and assignments in our MOOCs. For example, making an information management plan did not turn out to be a functional solution in many situations. One important new improvement was as an

automatically created certificate that became available after the student completed all compulsory exercises.

The major reform concerning the assignments is the division into voluntary and compulsory assignments. The voluntary assignments mainly encourage the student to consider their own project of writing the bachelor's or master's thesis in the light of the section topic, e.g. evaluating information. All of the compulsory assignments are required to be at least 80 % correct to get the certificate. The certificate is not an official credit, but an indication of the student having completed the compulsory assignments. The submission of the certificate is still in the Moodle areas of the seminars, as instructed by the teachers of the study programmes. The study programmes decide whether ECTS credits are granted or not.

The improved MOOCs were launched at the beginning of the term 2018–2019. Before the launch, they went through student testing. The bachelor's level MOOC was fully rewritten, but the changes in the master's level MOOC were not as extensive. Additionally, we launched a third MOOC in Swedish language in January 2019. It corresponds to the Finnish bachelor's level MOOC and was translated after the improved MOOC was launched, but some changes and additions applicable specifically to the Swedish speaking students were made.

Our goal is to have more cooperation with the teachers from the faculties to develop the courses. The contacts are also necessary to find flexible and easy ways of integrating the course or the course material into curricula. Some stick or carrot is needed because students tend to forget the MOOCs if they are not a requirement in their studies. We encourage teachers to embed parts of the course or the whole MOOC into their own course materials.

When the MOOCs are integrated into curricula, the needs of different disciplines should be taken into account. At the moment the MOOCs have a general focus and the different information resources are just linked to the MOOCs. As a result the MOOCs contain a lot of links to materials which are located somewhere else, e.g. ResearchGuides (http://libraryguides.helsinki.fi).

One thing that lies ahead with the MOOC development is recording short video lessons of various topics. Our MOOCs are quite text-based at the moment with no alternatives to different types of learners.

Using these MOOCs as a part of contact teaching would help to optimize our workflow. MOOC could be a prerequisite for participation in face-to-face lessons.

We are continuously collecting feedback to further develop the courses. The feedback from students has been mainly positive – even in the beta phase. Major changes to the assignments are made only between the terms when there are not so many participants online. Changes in text and minor adjustments are made whenever necessary.

Conclusion

What did we achieve by using MOOCs to shift the library's IL teaching towards online teaching? Most importantly these new MOOCs enable students to study independently at any time and in any place. The courses are available for larger amounts of students than library's former face-to-face courses and the MOOCs are open for anyone, not only the students at the University of Helsinki. The MOOCs or parts of them as well as the materials are reusable as they are licensed under Creative Commons Attribution-NonCommercial 4.0

The diminishing resources in IL teaching of the library can be combined to maintain MOOCs and simultaneously focus on the contact teaching we still have. The compulsory assignments in MOOCs are checked automatically and the certificate is created automatically, thus verifying the certificate submission is a quick process for the study programme teacher.

It is challenging to have different groups with diverse needs as the general MOOC content cannot be customized towards individual study programmes.

How to make meaningful and interactive assignments, which measure whether the students have really learned, is also a challenge. It is difficult to find out how relevant and effective the interactive exercises truly are and the interaction level is quite limited.

The occasional technical problems, especially in the first months after launching the MOOCs, reminded us how dependent we are on technical issues. The feedback from students concerning the assignments referred mostly to navigation or technical problems, not the actual content. To make sure the course is technically reliable is very important especially if the students earn ECTS credits for it. It is a matter of students´ legal protection.

Our future aim is to enrich the materials and assignments and to enhance collaboration with various faculties, study programmes, and support services. We appreciate any feedback on our MOOCs – feel free to contact us whenever you have questions or comments.

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