

## **From Teachers to Students: Digital Literacy Course for University Teachers**

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### **Abstract**

Literacies in their many forms are essential skills for higher education students both in their academic studies, in their future working life, and as the citizens of a highly digitalized information society in general. Information literacy education for students is an established task of academic libraries. Information literacy is taught above all for undergraduate students, but also for graduate students and even, albeit more rarely, for post doc researchers and faculty. The most significant weakness of information literacy education offered by libraries is probably, in terms of effectivity, that students perceive information literacy education as something separate from their “actual” studies and are not able to transfer the learned information skills to their subject studies. This occurs in spite of the persistent efforts of liaison librarians to adapt their information literacy teaching to the needs of each discipline. Instead, university teachers are in a key position to contribute to students’ information skills by including information practices in their teaching and tutoring. Therefore, information literacy training for university teachers is a valuable means to develop also their students’ information skills.

This paper tells about practices utilized and experiences gained on piloting a digital literacy course for university teachers. Tritonia Academic Library in Vaasa, Finland was responsible for planning and teaching of the course *Digital literacy and information resources*, 5 ECTS. The course was a part of a 60 ECTS higher pedagogy study module that is developed and piloted in a research based and research supported development project HELLA – Higher Education Learning Lab led by Åbo Akademi University in 2017–2019. The pilot course of *Digital literacy and information resources* was designed in the academic year 2017–2018 and piloted in the winter 2019. In this paper, the teaching design process, learning objectives, teaching methods, and practical execution of the course are described and self-evaluated. Special attention is paid to the leaning assignments of the course in order to give some practical examples of good practices found and problems met. A special characteristic of the course design examined is its multilingualism: the course was executed in three languages, with Finnish-,



Swedish- and English-speaking participants taking part in the same trilingual online course.

The main forum for the teaching and learning in the course was the learning environment Moodle. All course materials, assignments, instructions, and discussions were carried out in Moodle. In addition to online studies, the course included lectures and seminar sessions arranged as hybrid teaching. Thus, lectures and seminars could be attended in the classroom or online via a videoconferencing platform. Special attention was paid to online communication, because the whole course could be completed by distance learning. In the course, different digital tools, assignment types, and teaching methods were utilized in order to give participants examples of different opportunities in besides information retrieval, also in digital teaching. To have a digital literacy course included in a higher education pedagogy study module highlighted the relevance of information literacy in teaching and research. Further research based on participants' feedback and also long-term feedback would be worth conducting.

**Keywords:** academic libraries, digital literacy, education, information literacy, university teachers, Finland

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## 1. Introduction

In a fast-moving world where technology has become intertwined with our daily lives, information is available at our fingertips. In the realms of education, becoming a confident navigator of information is the key to successful lifelong learning. (Gibson & Smith 2018, 733.) Information skills are essential for higher education students both in their academic studies, in their future working life, and as the citizens of a highly digitalized information society in general. The cultivation of information skills is an ongoing process in higher education from graduate students to doctoral students and faculty (Dold 2014, 180).

Information literacy education for students is an established task of academic libraries (Rintamäki & Lehto 2018a, 2018b). Information literacy is taught above all for undergraduate students, but also for graduate students and even, albeit rarely, for post doc researchers and faculty. The most significant weakness of information literacy education offered by libraries is probably, in terms of effectivity, that students perceive information literacy as something separate from their "actual" studies and are not able to transfer the learned information skills to their subject studies. This occurs in spite of the persistent efforts of liaison librarians to adapt their information literacy education to the needs of each discipline. In subject studies, university teachers are in a key position to contribute to students' information skills by including information practices in their teaching and tutoring. Thus, information literacy education for university teachers is a valuable means to develop also their students' information skills.

Although some great theory and research on the information needs and habits of scientists can be found, there has been relatively little written on how to adapt established information literacy practices to researchers (Exner 2014, 465). This

paper describes practices utilized and experiences gained on piloting a digital literacy course for university teachers that was arranged as a part of a 60 ECTS higher pedagogy study module at Åbo Akademi University, in Vaasa, Finland. Tritonia Academic Library was responsible for planning and teaching of the course *Digital literacy and information resources*. In this paper, the teaching design process, learning objectives, contents, teaching methods, and practical execution of the course are described and self-evaluated. Special attention is paid to the learning assignments of the course in order to give some practical examples of good practices found and problems met. A special characteristic of the course examined is its multilingualism: the course was executed in three languages, with Finnish-, Swedish- and English-speaking participants taking part in the same trilingual course.

In this paper, Chapter 2 covers the concepts of information literacy and digital literacy. Chapter 3 sums up research findings on university teachers' information literacy skills, information literacy education practices, and information literacy training needs. Chapter 4 introduces the 60 ECTS higher education pedagogy study module that is developed in the HELLA project in 2017–2019. Chapter 5 describes the course *Digital literacy and information resources*. Chapter 6 takes a closer look at the learning assignments of the course. The paper ends in a conclusion on lessons learned and needs for further studies. This working paper constitutes a part of the research-based development of the course *Digital literacy and information resources* and the HELLA project.

## **2. Background: Information literacy and digital literacy**

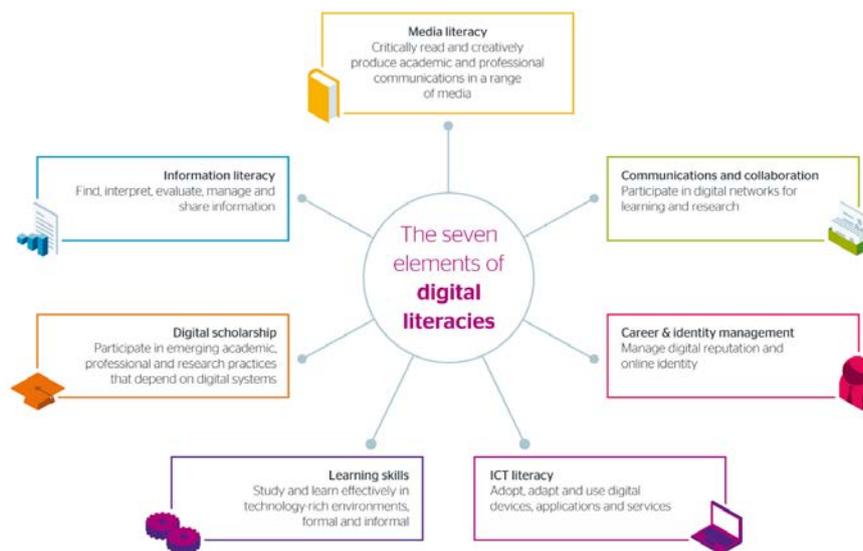
Preparing students for a complex and dynamic future is a challenge for universities. Phenomenology provides an epistemological foundation for learning about and interacting with the world outside the university. (Østergaard et al. 2010, 23.) In Phenomenon-based Learning, holistic real-world phenomena provide the starting point for learning. The phenomena and the information and skills related to them are studied in their real context. According to the phenomenological perspective, students integrate new information with prior knowledge through reflective experience (Francis 2013, 61). At its best, phenomenon-based learning is problem-based learning, where the students build answers together to questions concerning a phenomenon that interests them. (Silander 2015.) A profound aim in Phenomenon-based Learning is to bridge two learning communities: the university and the working-life (Østergaard et al. 2010, 23). In the constantly changing working life, the information skills and the importance of the creativity are emphasized. One must be able to learn and adopt information and to estimate its reliability and validity. (Hynnä, Laitila & Mäntylä 2018.) The ability to identify the need for information, to access, effectively use and present information is critical for any knowledge worker to be effective in the workplace, develop herself/himself, make decisions and present ideas. Information literacy enables employees to effectively undertake these activities and fulfil business goals. (Cheuk 2017.)

Information literacy describes a person's ability to find, evaluate, and use information competently (Dold 2014, 180). The educational goal of information literacy teaching has shifted from dispensing facts toward facilitating students' learning (Witt & Dickinson 2004, 88). Education to information literacy emphasizes critical thinking and the necessity to recognize message quality (Koltay 2015, 408). Advanced information literacy is achieved through practice, rehearsal, reflection, and the capacity to draw information critically from multiple sources in order to create new knowledge (Green 2010, 317). In 1989, ACRL defined information literacy as the ability to "recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information" (American Library Association 1989). During the present decade, the scope of information literacy has expanded. More emphasis is given to the research process as a whole, from data collection through data analysis and sharing, to data preservation and discoverability (Carlson et al. 2015, 17). In 2015, ACRL defined information literacy to be "the set of integrated abilities encompassing the reflective discovery of information, the understanding how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (American Library Association 2015). This new Framework for Information Literacy for Higher Education stresses the research process in a much more holistic fashion, the understanding about research work, and the very nature of scholarship (Badke 2015, 71).

Information literacy is extremely important for scholarly communication in the 21<sup>st</sup> century. Scholarly communication is impossible without the implementation of information literacy skills – researchers must know how to search, evaluate, produce, and present information in an ethical manner, how to make information more visible and accessible, and how to improve its quality and impact. A new, important aspect of information literacy is open access. (Hebrang Grgic 2016, 225–256, 263.) In addition, the rise of the Web 2.0 has brought changes in the way in which researchers discover, access, create, manage, and communicate information. Changes in research cultures and scholarly communication also have a direct impact on information literacy. (Koltay, Špiranec & Karvalics 2015, 92.) Information literacy must provide skills to critically evaluate sources of knowledge through issues such as authorship, authority, information seeking behavior, gatekeeping, intellectual property and emerging information communication technologies (Hoffmann & Wallace 2013, 548). CILIP (2018) even takes a step further and defines information literacy as empowering "us as citizens to reach and express informed views and to engage fully with society". The new information literacy definitions emphasize not only searching and using information, but also creating information and participating in the academia and in the society as a whole (Rintamäki & Lehto 2018a).

Information literacy has close connections to other literacies, e.g. data literacy, digital literacy, ICT literacy, media literacy, research literacy, scientific literacy,

and visual literacy (Rintamäki & Lehto 2018a). Although ICT proficiency does not imply information literacy, it is reasonable to suggest that it is now impossible to attain any standard of information literacy without some level of ICT skills (Patterson 2009, 16). Data literacy – aka statistical literacy, quantitative literacy, or numeracy – is a critical component of information competence (Stephenson & Schifter Caravello 2007, 525) that covers issues like data collection, data analysis, and data visualization. More and more libraries are launching data information literacy initiatives as a component of the data services offered to their constituencies (Carlson et al. 2015, 16–17). Digital literacy emphasizes the use of digital technology (Koltay 2015, 411). Its importance is increasing due to the predominance of communication technologies in academia (Kenton & Blummer 2010, 96). Tsatsou (2018, 1240, 1254) underlines that digital literacy in digital research is not just about technical user skills, but also includes user–technology interactivity, aka involves researchers’ experiences, emotions and complex processes of learning, practicing and self-development when they interact with technology. Greene, Yu and Copeland (2014, 55) argue that two critical aspects of digital literacy are the ability to effectively plan and monitor the efficacy of strategies used to search and manage the wealth of information available online, and the knowledge to vet and integrate those information sources. Their definition of digital literacy approaches the definitions of information literacy. Jisc uses the term digital literacy as an umbrella concept that includes seven different elements of digital literacy: information literacy; ICT literacy; media literacy, including e.g. visual literacy and multimedia literacy (Jisc 2011, 2); learning skills; communication and collaboration; digital scholarship; and career & identity management (See Figure 1).



**Figure 1** Jisc (2014). Seven element of digital literacies. CC BY-NC-ND

Jisc (2011, 2) defines digital literacy as “capabilities that fit an individual for living, learning and working in a digital society”. All of these capabilities are expressed in specific learning, teaching and research activities, which take their meaning from the subject areas in which they are practiced (Jisc 2011, 2–3). Jisc’s broad concept of digital literacy was chosen for the course *Digital literacy and information resources*.

### **3. Information literacy education at universities**

In the 2000s, e.g. because of the Bologna process, European higher education institutions have faced a number of changes that have implied a shift from the lecture-based delivery model to a more interactive and student-centered learning environment. Teachers play a double function, which requires them to be learners as well as teachers as they develop teaching models and practices, focused on their students in order to create new learning environments. (Veiga-Simão et al. 2015, 103.) Information and communication technology (ICT) tools and resources are also changing both the process and product of education with new and creative ways for learning and for teachers’ professional development. Skills in information processing are key factors for technology use in facilitating effective classroom interaction through computer-mediated communications. (Otuola 2013, 33.)

Although ICT tools are often seen as self-guiding, they actually are not, but require as much, or even more, guidance than face-to-face interactions. Still, many teachers think that web-based teaching offers valuable opportunities, like utilizing versatile teaching materials. (Pekkarinen & Hirsto 2017, 745.) At the same time, faculty struggle with the pedagogic aspects of their work. Especially novice teachers have different conceptions of being a university teacher: they have different abilities for addressing problems, different needs for a support system, different conceptions of roles, etc. As work experience increases, the transition from personal-self to professional identity calls for a much closer understanding of what it means not only to be a university teacher, but also the roles and responsibilities within the profession. (Remmik, Karm & Lepp 2013, 340.) In Finland, faculty typically start their career as researchers and later turn to teachers. Therefore, university teachers identify themselves more commonly as researchers and do not recognize their pedagogical competence as strongly. However, it is a current strategic goal of all Finnish universities for every academic to be engaged in both research and teaching. (Pekkarinen & Hirsto 2017, 748.) Institutional support, both in terms of resources and underpinning values, is important in and conducive to professional learning about teaching (Saroyan & Trigwell 2014, 99).

Information literacy education for students, even information literacy courses included in the curricula, is an established task of university libraries (Rintamäki & Lehto 2018a, 2018b). Information literacy is taught above all for undergraduate students, but also for graduate students and even, albeit rarely,

for post doc researchers and faculty. Information literacy is important; that much is broadly accepted (Whitworth, Mcindoe & Whitworth 2011, 41). Information literacy is the de facto structure around which many academic libraries currently organize their instructional programs. From pre-college to faculty levels, libraries use variants on the information literacy concept to organize instructional initiatives. However, most material on the topic addresses undergraduate instruction. Yet, original research is information-rich and must be learned, and should therefore be given the support of information literacy training. On campus, the most common researchers are graduate students and faculty. (Exner 2014, 460.) Information literacy training for them is especially important and discerning. A research student must be creative, autonomous and individualistic. Information literacy education for postgraduate research students must therefore pay respect to the particular nature of research work. (Whitworth, Mcindoe & Whitworth 2011, 41.)

Academic libraries have a very strong status in the information literacy education, but one-shots do not accomplish the main goals of information literacy. However, the task of developing information-literate students is too large to leave to the librarians alone. (Badke 2017, 67.) Information literacy instruction should be extended beyond the libraries and media centers and into a synergistic environment (Witt & Dickinson 2004, 84). The most significant weakness of information literacy education offered by libraries is probably, in terms of effectivity, that students perceive information literacy education as something separate from their “actual” studies and are not able to transfer learned information skills to their subject studies. This occurs in spite of the persistent efforts of liaison librarians to adapt their information literacy teaching to the needs of each discipline. Instead, university teachers are in a key position to contribute to students’ information skills by including information practices in their teaching and tutoring. Enlisting faculty in the cause of information literacy is the key to putting it on the academic agenda (Badke 2017, 67). Supervisors form the most valued, frequent and influential academic contacts for graduate students (JISC & British Library & 2012, 60; Delaney & Bates 2018, 79).

However, one should not assume faculty to be information literate. Research shows that teachers often lack the information literacy skills and knowledge required for their work (Godbey 2018) and use mostly information sources within the familiar surroundings of the school due to easy access, lack of knowledge about possible sources, and lack of confidence in one’s own information skills. They feel more confident in finding general than research information or using any information. (Williams & Coles 2007, 193–204.) Even doctoral students have very varied educational experience and information skills: older students are not digital natives, and young, digital native students usually have more confidence than competency in research literacy (Delaney & Bates 2018, 67–72).

Supporting students in gaining access to academic literacies is even named as one of the most challenging responsibilities for higher education teachers (Bergman 2016, 516). Educators must see it as part of their role not only to inspire and teach, but also to equip learners with the autonomy to navigate their own quests for information. Critical reading and writing are key, and with the blossom of digital resources, the critique of sources is essential. Learners must be prepared with skills to find, gather, filter, process, and shape information, to create new information, and to share that information with others who, in turn, are on their own information journey. (Gibson & Smith 2018, 739.) Research indicate that university teachers instruct students in defining topics, finding articles and books for projects, critically evaluating resources, synthesizing materials, and avoiding plagiarism. In general, they do not assign teaching assistants, collaborate with librarians, or engage other staff to teach these competencies. (Weiner 2014, 9.) Still, e.g. the role of doctoral supervisors focuses on imparting discipline-specific knowledge, and they are less inclined to convey high-level information skills (Delaney & Bates 2018, 66).

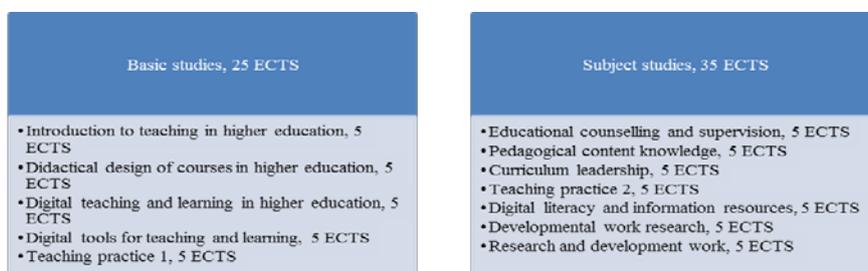
Though teachers are very critical of students' information skills, they are not aware of how to teach information skills or how to apply research-based teaching, and the most common way of teaching information literacy is to recommend trustworthy sources for students' assignments (Togia et al. 2015, 226, 236–237). They give some advice on how to evaluate e-resources, but they do not feel competent enough to go deeper in this topic or able to teach the higher-level skills of evaluating, interpreting, synthesizing and using information, incorporating selected information into one's knowledge base and creating new knowledge (Xu & Chen 2016, 343–344). In order to model the information process for their students, it is important for teachers to reflect on their own use of information in professional learning (Williams & Coles 2007, 204). With digital texts playing a key role for both tutors and students, a shift in focus from the finished product towards explorations of practice how the academics themselves engage in knowledge production in a digital world would be worth a try. This could enable teachers to align student practice with their own digital knowledge-making practices and represent the complex rhetorical activity involved in their own published work. (Lea 2013, 115.)

Professional development opportunities, on-the-job training and guidance would increase teachers' ability to integrate technology and IL skills into teaching. The better teachers' information literacy, the higher intention and ability of information technology integrated instruction to enhance teachers' teaching effectiveness. There are close relations among information literacy, information technology integrated instruction, professional growth, and teaching efficacy. Thus, the promotion of teacher literacy could enhance the information technology ability, professional growth, and teaching efficacy. (Xu & Chen 2016, 343–344.) Therefore, digital literacy education for university teachers is a valuable means to develop even their students' digital literacy.

#### 4. The higher education pedagogy study module developed in the HELLA project

The Finnish higher education system comprises 13 academic universities and 23 universities of applied sciences that operate in the administrative sector of the Ministry of Education and Culture (Opetus- ja kulttuuriministeriö 2019b). The Ministry expects universities to develop the quality of their education by reforming education contents, teaching methods, learning environments, and teachers' know-how, by utilizing digitalization, and by increasing cooperation in support services, infrastructures etc. Finnish universities are also committed to the international goal to increase the efficiency of high-quality research, to strengthen research infrastructures, and to promote open science via digitalization. (Opetus- ja kulttuuriministeriö 2019a.) In Finland, faculty's digital skills are accentuated as an essential segment of higher education pedagogy in the teaching project HELLA – Higher Education Learning Lab in 2017–2019 financed by the Ministry of Education and Culture.

HELLA is a research-based development project on higher education pedagogy that is developing and piloting a new study module (60 ECTS) in higher education in order to strengthen the pedagogic and digital teaching competencies of the teaching staff of the universities and universities of applied sciences. (HELLA 2019.) The study module of higher education pedagogy includes the following basic and subject studies:



**Figure 2 Structure of higher education pedagogy study module, 60 ECTS, at Åbo Akademi University**

The concept of university pedagogy or higher education pedagogy refers to developing and studying higher education, including learning, studying, teaching, guidance, grading, pedagogic leadership, and supporting the pedagogic competence of teachers and communities widely in university context. Higher education pedagogy is a multidisciplinary science utilizing especially pedagogy, psychology, social psychology, philosophy and sociology, but also other behavioral and social sciences. (Helsingin yliopisto 2018, Jyväskylän yliopisto 2019.)

Besides developing and piloting the higher education pedagogy study module, the HELLA project aims to develop operating models for internal use in the institutions of higher education as well as models for co-operation between the universities and universities of applied sciences (HELLA 2019). So far, higher education pedagogy has been taught in separate study modules for and by academic universities as well as for and by universities of applied sciences. In the HELLA project, these two university sectors are brought together for the first time in a shared higher education pedagogy study module. There are five higher education institutions involved in the project: two universities – Åbo Akademi University and University of Vaasa – and three universities of applied sciences – Arcada University of Applied Sciences, Novia University of Applied Sciences and VAMK University of Applied Sciences. (HELLA 2018.) Besides two university sectors, the project brings together three languages, because three of the partner universities – Åbo Akademi University, Arcada and Novia – have Swedish and two of the partner universities – University of Vaasa and VAMK – Finnish as their official language, and all five universities also have English-speaking teaching staff.

The project is led by Åbo Akademi University and coordinated by Tritonia Academic Library, EduLab. Tritonia is a joint academic library of five higher education units located in the city of Vaasa: University of Vaasa, VAMK University of Applied Sciences, Novia University of Applied Sciences, Åbo Akademi University, and Hanken School of Economics. Tritonia offers library and information services for students and staff, and teaching development services for staff by its digital support unit EduLab. EduLab supports the development of digital education by offering consultation and training in both technical and pedagogical issues. Within the HELLA project, EduLab gives two courses in the higher education pedagogy study module: *Digital teaching and learning in higher education* and *Digital tools for teaching and learning*.

### **5. Digital literacy course for higher education teachers**

In the HELLA project, Tritonia Academic Library is responsible for planning and piloting of the course *Digital literacy and information resources* (5 ECTS). The course aims to develop faculty's information skills, digital skills and pedagogic skills to use digital information resources in their teaching and research. The starting point for the course is a hypothesis that teachers' digital literacy is reflected in their teaching and forms a model for students' literacy. The learning objective pursued is to integrate information retrieval into teaching so that teachers with their behaviour can give students an example of good information practices and support students' information retrieval. Consequently, the course aims to enhance teaching practices and culture that support students' working life skills and lifelong learning.

The course was designed in December 2017 in an intensive workshop project by a team of Tritonia's information specialists and pedagogues. The workshop followed Gilly Salmon's Carpe Diem Learning Design Model. Carpe Diem is a

team-based learning design process to be used as an alternative to traditional staff development processes to create fast, effective, and forward looking learning design. The workshop is spent on designing something that can be put into immediate use with learners: the vision, learning outcomes, action plan, schedule, activities, assessment and online environment of the course. (Salmon 2019.)

The Carpe Diem workshop for the HELLA digital literacy course included an orientation session (à 2 hours) and a two-day workshop (à 6 hours). The multi-professional team consisted of eight experts that all have their own duties in the work process. A pedagogue led the workshop and moderated the collaboration. Another pedagogue acted as an advisor in ICT questions. A new recruit took the role of a course participant and listened to the discussion as a critical friend outside the library profession. Four information specialists provided the expertise and experience in information literacy teaching and planned the thematic substance of the course. In the workshop the vision, learning objectives, action plan, schedule, activities, assessment and online environment of the course were planned. The vision of the course was to integrate the model for scientific information retrieval into teaching and research. The learning objectives and the thematic contents of the course were defined as follows:

<b>Learning objectives</b> The participant will after the course be able to	<b>Contents</b>
<ul style="list-style-type: none"><li>• describe and explain the meaning of information retrieval in teaching and research</li><li>• choose, use and evaluate licensed and open access scientific information resources</li><li>• integrate information retrieval, use and evaluation of information in teaching and research</li><li>• support the student in independent information retrieval and use by using his or her own practice and guidance</li><li>• apply practices in open science to teaching and research</li></ul>	<ul style="list-style-type: none"><li>• Licensed and open access digital information resources and how to use them in a pedagogical way in teaching</li><li>• Information resources for the participants' own disciplines and teaching</li><li>• Information retrieval, use and evaluation of information as part of teaching, research and development</li><li>• Supporting students in their own information retrieval and use of information</li><li>• Utilizing open access resources within the participants' own disciplines and applying operating models to teaching and research</li></ul>

**Figure 3 Learning objectives and contents of the course Digital literacy and information resources**

The course contents planned in the workshop – learning environment, learning assignments, course materials, and evaluation criteria – were elaborated into an online course in the summer 2018. The pilot course took place in November 2018–February 2019. In order to enhance the sense of community, peer-support,

and collaboration among the course participants, as well as to give them a better opportunity to personal communication and tuition with the course teachers, the number of participants was limited to 30 people. The pilot course was participated by 30 faculty members from five partner universities of the HELLA project.

The main place of the teaching and studying of the course was the learning environment Moodle. All course materials, learning assignments, and instructions were supplied, all assignments submitted, and all online discussions carried out in Moodle. Moodle is widely used in Finnish universities, including the five partner universities of the HELLA project. Thus, all participants were familiar with Moodle and needed little guidance for Moodle tools. Besides online studies, the course included three lectures and two seminar sessions. They were arranged as hybrid teaching so that the participants could participate in the lectures and seminars either in the classroom or online through the videoconferencing platform Zoom. The whole course could be completed by distance learning. This was essential because the participants worked in five different university units in three different cities that are located 200–400 kilometers from each other. Digital education was also emphasized because studies indicate that digital learning works especially well in information literacy teaching. In information literacy teaching, students prefer online modules and online assignments, like quizzes, to in-person workshops (Earp 2009, 175–176). Different tools and different assignment types were utilized in order to give participants ideas and examples for their own teaching. In the course, distance education, e.g. the videoconferencing platform Zoom, worked very well. In all courses arranged in the HELLA project and in short courses arranged by Tritonia, even participants located in Vaasa prefer Zoom to Tritonia's classrooms. Being technically functional and easy to use, Zoom created quite a good illusion of face-to-face interaction. Instead of dividing course teachers' and participants' attention between the classroom and Zoom, it would be interesting to test solely online communication via Zoom in future courses.

The course was implemented in three languages: all course assignments and instructions were given and all course assignments could be submitted in Finnish, Swedish or English. However, to give the same information for all participants, most source materials were in English. In the officially bilingual country of Finland, it is a matter of utmost importance to provide equal linguistic services for the Finnish-speaking majority and the Swedish-speaking minority. Before the course, course assignments and general instructions were written in Finnish by the primary teacher of the course and translated into Swedish and English by Tritonia's translator. In order to provide equally high-quality teaching in Finnish and Swedish, a joint teaching of a Finnish-speaking and a Swedish-speaking information specialist was utilized. The head of education and researchers' support services of Tritonia had the primary responsibility for designing and teaching of the course and tutored two Finnish-

speaking and one English-speaking group. The vice director of Tritonia tutored two Swedish-speaking and one English-speaking group. The weekly instructions and feedbacks for the whole group were written in Finnish, Swedish and English. Individual guidance and feedback were given in each participant's language. By lucky coincidence, all three languages were represented quite equally between course participants. Thus, participants could be divided in six study circle/tutorial groups of 4–6 members each. Besides providing tutoring by a native speaker to Finnish- and Swedish-speaking participants, the joint teaching strengthened the expertise, guaranteed a reliable substitute teacher system, and gave the course teachers an opportunity to share experiences and reflect on assessment principles, for example.

## **6. Course assignments**

The course included six assignments, of which three included two parts. In the course, participants wrote individual online assignments, collaborated with their study circle group, and participated in online discussions and hybrid seminars (at Tritonia or via Zoom). In order to give some examples of different digital information resources, course materials included e-books, e-articles and video materials. Open access materials were favoured as much as possible. In addition to course materials, three expert lectures (à 2 hours) on different topics were given by the course teachers and by Tritonia's director. The lectures elaborated on open science, students' information retrieval skills, and visibility and impact of publications in the teacher's profession. The lectures were recorded via Zoom and were saved in Moodle. Thus, the participants could watch them at any time.

The course started with a reflective assignment *My information landscape* where participants familiarized themselves with the course and its contents and reflected on their own learning objectives for the course. For the teachers, the assignment gave background information about the participants and their information needs and expectations. The study circle groups used for the following assignments were created according to the language of this first assignment. In the second assignment *Today's information landscape*, the viewpoint widened from the participants' own information landscape to today's information landscape in general. The study material for the assignment contained both videos and newspaper articles that presented different views on information reality. In the assignment, participants wrote their own replies to the study materials from their own viewpoint as university teachers and researchers. After submitting their own texts, they read the texts of their study circle group members and wrote an online discussion comment to each member on viewpoints they found interesting. The instructions for online discussion were quite general giving a chance to write either a polite praise or an academic debate on factual content.

The third assignment was a group work assignment *Wiki article on literacies*, where each study circle group wrote a joint wiki article on a chosen literacy theme by using the study literature listed for the assignment. The study circle

groups were asked to agree on the distribution of work so that every group member could contribute to the common task. The groups chose their working methods themselves and kept in touch for example by chat, by e-mail, via Skype, via Zoom or by phone. After writing their own texts, each participant read a wiki article by another group and wrote an online discussion comment on the thoughts or ideas in the text that they found particularly interesting. Originally, the idea was that each participant would read all the wiki articles. In practice, this might have been impossible, because international faculty members seldom understand both Finnish and Swedish. Therefore, two English-speaking groups were asked to read each other's texts. In order to be fair, the same amount of work was allocated to Finnish- and Swedish-speaking groups, in spite of the fact that Finnish faculty members usually understand all three languages. The study circle groups could also choose their working methods. They could divide their topic in part between group members or co-write their article as a group. Again, general online discussion instructions made possible either polite praises or academic debates on factual content. However, peer-reviewing might work better in group assignments, because it might be easier to act as an opponent to a group, not an individual.

The fourth assignment *Information retrieval and information resources* moved from the themes of information landscape and literacies closer to the participants' own teaching and research. In the assignment, participants reflected on information and information seeking in higher education and research in general, in their own field of science, and in their own teaching, as well as on instructing students in information retrieval. The source material included study materials on information retrieval. Both text materials and video materials on different themes were recommended in order to give participants an opportunity to choose materials relevant from their own point of view. As for the reflective assignments, the written reports were submitted as private assignments that were only seen by the teachers. This way, participants could tell about their real information practices without needing to keep up appearances in front of their colleagues. The assignment addressed information retrieval, and in this subject the course teachers as librarians were the best experts. Contrary to other assignments, the teachers wrote a short verbal feedback for each participant to guide them towards the final assignment of the course.

The fifth assignment *Development plan for information retrieval* was the final assignment tying together the contents of the course. In this assignment, each participant made a development plan for information retrieval within a chosen course entirety. The assignment included a written report and a Pecha Kucha summary. Pecha Kucha is a presentation style in which 20 slides are shown for 20 seconds each (6 minutes and 40 seconds in total). The format keeps presentations concise and fast-paced. The short format gives more people the chance to present, while keeping the interest level up. (O'Byrne 2016.) In this course, the Pecha Kuchas were presented in two seminar sessions (à 4 hours).

According to the linguistic principles of the course, reports could be written and oral presentations given in Finnish, Swedish or English. Presentation times and peer-reviewers were allocated by language. Each participant could take part in both seminar sessions in their entirety, but only needed to participate in one session and the part in her or his language. Participants understanding English, Finnish and Swedish could listen to all the presentations of the seminar(s). Each peer-reviewer listened to the oral presentation for which she or he gave feedback. The peer-reviews were primarily given in written form in Moodle, but short comments were given in seminar sessions, too. While designing the course, Pecha Kucha was seen as a workable format for as many as 30 presentations. Although there are different aspects in information retrieval, 30 presentations can include many similarities. Thus, even concise and fast-paced presentations can be information-rich enough to give rise to a lively online and/or face-to-face debate.

The sixth, and last, course assignment was a reflective assignment *My information practices today and tomorrow*. In this assignment, participants were asked to read their reflective texts they wrote at the beginning of the course and reflect on how they have achieved their learning objectives, what else they had learned, and how they would use these lessons learned in the future. The assignment focused on participants' self-evaluation instead of feedback for course teachers. Self-evaluation emphasized participants' active role in her or his information behaviour. Course feedback from all courses piloted in the HELLA project during the academic year 2018–2019 will be collected later in the spring 2019.

According to the general policy of the entire higher education pedagogy study module (60 ECTS), the individual assignments and the course as a whole were marked pass or fail. In order to pass the course, a participant had to submit and pass all six assignments. In retrospect, the most controversial decision regarding the course assignments was to offer participants several alternative source materials. The idea was to acknowledge participants' different starting levels, backgrounds, and information needs, and not to underestimate their existing information skills. However, digital literacy might be quite an unknown territory even for academics. Therefore, another functional option would have been to give a few compulsory source materials for each assignment in order to give each participant a good grounding in the fundamental aspects of digital literacy.

## **7. Conclusions and further studies**

To have a digital literacy course included in a higher education pedagogy study module was a valuable opening in highlighting the relevance of information literacy in teaching and research. The pilot course reached a new audience, faculty, in addition to information literacy courses for students. By chance, the 30 pilot course participants represented all possible varieties: two university sectors, three languages, five partner universities of the HELLA project. For the course teachers, these differences did not create any problems, since participants

seemed to have similar interests regardless of their background. The trilingual course required some extra work, but with two teachers, it was not a significant problem. It would have been possible to arrange the course solely in English. That would have maximized the equality of participants, all operating on their second language. Still, it was considered valuable that at least the Finnish- and Swedish-speaking participants could discuss unfamiliar themes in their own language. From the course teachers' point of view, the trilingual course worked well.

The course teachers' experiences of online teaching were positive. Since even local course participants prefer videoconferencing to classroom attendance, instead of the hybrid education used, solely online education via videoconferencing and learning environment would be worth testing in the future. The course assignments were largely dedicated to the participants' own reflections and learning e.g. by offering several alternative source materials for each assignment. Another worthwhile option would be giving a few compulsory and fundamental source materials to all participants. This way, all participants could learn the same basics. In most assignments, participants were asked to peer-review each other's texts. The main point was to motivate participants to read each other's texts, but at its best peer-reviews can spark off a lively discussion. The course teachers gave general feedback on all assignments to the whole group, and individually on the last assignments of the course as well as if requested by a participant. All in all, the designing and teaching of the pilot course was a rewarding experience and spurred us to evaluate and develop it further.

Herrero et al. (2015, 508) noticed that teachers that had participated in a workshop on ICT-based learning tools highlighted the vast possibilities of using the tools in the future and their usefulness in teaching. This meant the goal set for the workshop was achieved, given that during the course, a significant feature used in the methodology was the training of the teachers in the selected technologies to use it in the future during their own practices with students (Herrero et al. 2015, 508). A similar goal was set for this course. In the course, different digital tools and teaching methods were utilized in order to give participants examples of different opportunities in besides information retrieval, also in digital teaching.

In this paper, the course is self-evaluated solely from a course teacher's point of view. In the future, it would be worthwhile to examine participants' experiences and feedback on the course. It would be especially interesting to know if the course had any long-term effect on participants' information and teaching practices. There is seldom information on whether using new tools was useful for students' practice or students' opinion of the tools and their learning experience. There is little research evaluating the effect of teacher training in their real practice and in the long term to see the effects of this practice on the satisfaction and motivation of both teachers and students. (Herrero et al. 2015,

508.) The big vision for this course was to integrate the model for good information practices into course participants' teaching and research, and thus develop the information skills. The pilot course took place during four months. Thus, the course was by no means intensive, but aimed to give participants time to absorb new information. Still, further research with long-term feedback would be valuable in order to get information on whether the new knowledge was adopted – and whether the course made an impact on participants' actual information and teaching practices.

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