Integrating Information Literacy Education into the Curriculum at the University of Tampere, Finland

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Abstract

Our paper presents the collaborative process of integrating information literacy (IL) education into the curricula of the University of Tampere, Finland. This process occurred in the context of the latest University-wide education reform of 2010–2012. The paper discusses key factors for the success of this cooperative project and introduces the reader to the overall information literacy framework at Tampere University Library. In the reform, the objectives of the library were to offer IL education equally to all university students, to increase the use of electronic resources, and to integrate the study of information literacy as part of the competency-based curricula. IL should support students at different stages of their studies as a lifelong, academic skill.

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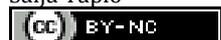
Introduction
Over the past decades, the demand and importance of information literacy (IL) education has increased at university libraries. This is because the supply of electronic resources has multiplied and the information environment has become increasingly complex. University students should be trained to use academic information sources efficiently yet ethically, and the university administration should be convinced that resources are being used in a cost-effective manner. When, in 2012, IL education was included as a compulsory subject in all new degree programmes at the newly created nine schools (i.e. the restructured faculties) of the University of Tampere (UTA), Tampere University Library (TUL) was motivated to improve IL education by establishing coherence in the curricula structures of IL education, and by ensuring that systematic IL training would be equally available to all students. Simultaneously, the successful fulfilment of this task was seen both as a challenge and as an opportunity to develop the library services in supporting studies and the University's research activities. All of this was made possible by cooperation between the librarians, decision-makers and curriculum planners. In our paper, we detail the process that led to this result.

The History of IL at the University of Tampere
TUL has a long tradition of teaching information literacy, information seeking and user education; information seeking has been taught at UTA since the 1970s. IL education was first compulsory for students of education and medicine. For students of the social sciences, the first optional IL course appeared on the curriculum in 1997, and it was later made more extensive and compulsory. In other faculties and departments, IL education became more commonplace in the 2000s; it was optional for some students and compulsory for others, and the amount of teaching hours varied. IL teachers at the library taught outside regular working hours as librarians and earned a separate fee for teaching.

The biggest problem prior to the latest reform in 2012 was that, due to their study programmes, students of some faculties did not have the opportunity to receive IL education, whereas students in other faculties had already had it in their curricula for decades. TUL saw information literacy as a crucial skill for students in succeeding both in their academic studies and after graduation. TUL wanted to ensure an equal level of information literacy for all students (Toivonen, 2012). The challenge was the lack of systematic structure and continuity in information literacy education throughout the curricula at the multidisciplinary University. There was also incoherence regarding how much IL education students received and when; some students came during their first year, whereas others only had a session attached to their advanced level studies seminar, and some had systematic compulsory IL education at various phases. It all depended on the study programme or faculty where they were studying. As a result, when the time approached to write their theses, students' IL skills varied greatly. Previously, when the library invoiced the faculties for the IL education, budget issues meant that not all faculties and departments could afford IL education. This in some cases resulted in unequal opportunities for students, and made it difficult for the library to estimate the amount of orders in advance.

The European-wide Bologna process has influenced curricular work in Finnish higher education, and the degree structure change and harmonizing demands have affected Finnish universities (for more information, see Mäkinen & Annala, 2012). UTA has not been exempt from these changes. In 2005, there were major changes and for many degree programmes, IL courses were integrated into the curriculum during this degree reform. (Iivonen, Tevaniemi, Toivonen, 2007, p. 149–150) In the 2000s, the National Information Literacy Recommendation in Finland helped many libraries to enhance IL in the curriculum and provided a framework to develop IL education (Juntunen, Lehto, Saarti & Tevaniemi, 2008). The situation was the same in Tampere as in the rest of the country, as stated by Juntunen et al. (2008, p. 131): "In Finland, librarians have striven to promote information literacy, and […] the country can be viewed as a model for other countries for having succeeded in making the political decision makers aware of the

importance of IL. However, much work remains to be done in higher education to effectively integrate IL more coherently into all stages of studies."

The most recent IL curriculum reform at UTA in 2010–2012 can be seen as a natural continuum of the earlier reform in 2005, since IL was now included for those students who had previously been lacking the systematic education. The Teaching Council of the University of Tampere advised all nine schools of the University to include IL in their degree programme curricula commencing from August 2012.

Implementation: How Tampere University Library Did It

The Timeline for the IL Curriculum Reform
UTA's University-wide curriculum reform was carried out between 2010–2012 in close cooperation with the schools, the University administration and the independent institutes. At the beginning of 2011, the University reorganized its structure and applied a two-level structure in which the previous departments and faculties were merged into nine schools. 25 new interdisciplinary degree programmes were planned at the nine new schools in order to commence from August 2012. The library's curriculum working group planned and proposed a three-stage IL model to be incorporated into the new degree programmes, and the library also made plans and calculations regarding the hours and staff resources required to realize the plan. (Toivonen, 2012)

An important milestone was a strategic seminar on the topic of information literacy in April 2011, opened by the library director, in which an IL coordinator, a University professor, and a student gave their respective presentations, and the participants discussed the importance of IL to university studies for students. This strategic seminar belonged to a series that supported the curricular work organized by the University Education Reform Project. It was realized in conjunction with the library, and the curriculum planners of the University participated. In May 2011, in the first document in the series of policy guidelines that schools needed to follow when creating new curricula, the Teaching Council of the University gave a guideline that IL should be integrated into the curricula, and that information literacy should be taught at the beginning of academic studies as well as later on in studies, for example, by being integrated into seminars. The first guideline described the new degree structure that included language and IL skills, which were seen as crucial. A three-stage IL model was thus applied in the curriculum reform, enabling students to learn at three relevant points during their studies. (Toivonen, 2012; Asplund, 2012)

In 2011, staff from the main library and two department libraries paid collaborative visits to the schools' respective curriculum groups. TUL had two important goals: to discuss the details of integrating IL into the curriculum and to increase the amount of electronic resources on the students' curriculum reading lists, which increases the usage and the cost-benefit of library-provided electronic resources. These meetings were attended by an IL coordinator or teaching librarian, a liaison librarian for that school and an acquisition librarian. The meetings took place at the schools' premises.

The library director negotiated with the rectors in the annual outcome evaluation meeting, and after successful negotiations the library received additional funding to resource IL education. Two new posts for information specialists were created and filled. Prior to this, it had been agreed that teaching would be given within the regular working hours of library staff and adjusted or added to the existing job descriptions, and that the library would no longer charge the schools for delivering IL education included in the curriculum.

The process involved rewriting competence-based learning outcomes for the courses in collaboration with the library and the schools (for the competence-based curriculum, see

Mäkinen & Annala, 2012). The process also involved a series of meetings and negotiations with the heads of education of the schools on the main campus and medical campus to agree upon the timing, the earning of ECTS study credits, etc. In the spring of 2012, the new curricula for the following three years were settled and the teaching schedule for the following year was confirmed with the University's schools. It was important for the library to divide IL sessions among all study periods to ensure that there were enough staff and available teaching labs. In the spring, IL coordinators and instruction librarians worked in collaborative teams to develop new online teaching materials and manuscripts. In August 2012, the new degree programmes were launched and the plans were put into action. All degree programmes included IL. IL education for medical students remained the same, with the emphasis on problem-based learning methods.

Collaboration and the Key Actors

The library had two important strengths in its collaboration with the University administration. First of all, active connections with University's upper management already existed, and secondly, rather than starting from scratch, the library staff had decades of experience that evidenced their ability to organize extensive IL courses; they had collected systematic feedback to develop their courses in the earlier years and annually presented the IL education statistics and feedback to the heads of education and rectors. In the library decision-making, the staff has used evidence-based librarianship as a method (Iivonen & Namhila, 2012), which means that the staff collects relevant data and evidence to back up any decisions made to develop the services. This is also the case with developing information literacy education at TUL. Huotari and Iivonen (2005, p. 328) assume that the University also gains a competitive advantage from this cooperation, whether it is collection development or IL cooperation: "... [the] competitive competence of the university will improve when the library is understood as an essential strategic partner in the creation of knowledge."

There were many actors in the process working at individual, library and University levels. The key actors within the library were the library director and the IL coordinators. From the beginning of the University-wide reform, the library had formed an IL curriculum working group of its own to ensure the process went smoothly, which comprised the library director, the head of administration, the head of information services and the IL coordinators from the main library and two department libraries. At the University level, the library director has for years worked as an expert member in the Teaching Council of the University. The library also had a representative in the University support group for the Education Reform Project. In addition, the library staff participated in curriculum meetings at the schools' premises. Throughout the process, it was important to ensure that communication was open and timely in all directions from University-level meetings to those within the library and vice versa. Students were also participants in the process and joined many of the University-level meetings; the student assembly is annually invited to the library to contribute to service development.

A key to success is collaboration. As pointed out by Huotari and Iivonen (Huotari & Iivonen, 2005), to be seen as a valued collaboration partner, the library must be proactive and form a strategic partnership with the University. It is vital to work not only with the administration but also to share TUL's expertise and combine forces with University lecturers; they are the experts in their academic field, just as TUL's staff are the experts in information strategies and IL education (Iivonen et al., 2007, p. 159–160). In Tampere, TUL is an appreciated member of the academic community. The latest reform further strengthened the library's role as an education provider.

Investing in Human Resources and Pedagogical Planning

The issue of money and resources is always a challenge. One key issue was to confirm that TUL had sufficient human resources to provide the IL education planned to be included in the new degree programmes. This was made possible by succeeding in outcome evaluation meetings, making rearrangements within the library job descriptions, and recruiting new staff. The library

director, as might be expected, has the key role in negotiating the budgetary issues. The increasing demand for new IL teachers is reflected in the library personnel plans. When a member of staff retires and a new member of staff is hired, the library always considers whether teaching is included in the job description of the new position.

The inclusion of library members on relevant committees and working groups has been a crucial factor; the library has been proactive in joining University-level meetings. Maintaining contacts with decision-making staff members is vital. The issue of time was also challenging – in addition to regular library duties, TUL staff had to make things happen in a relatively short amount of time.

There were, of course, pedagogical issues to consider. Attending university pedagogical studies has provided TUL staff with the methods to develop IL education and curricular work. Nearly all instruction librarians and all IL coordinators have attended the university pedagogy studies provided by the UTA. In the past two years, in the advanced course of the university pedagogy education organized by the University, the thematic emphasis was on curricular work, and the sessions addressed questions of competence-based curricula and collaborative curricular work. As two IL coordinators attended the advanced course in 2011 and one in 2012, this greatly supported TUL throughout the whole process. As was advised for all University course description programmes in the University policy, learning outcomes were required to be competence-based.

In previous years, TUL staff had also used what they had learned from the university pedagogical studies to develop IL education (see Tevaniemi, Valovirta & Tiitinen, 2009; Asplund, Mwiiyale, Karsten & Tapio, 2012). The library has also used John Biggs' theory of constructive alignment as a pedagogical approach to develop our teaching, and paid attention to the affective aspect of learning that is suggested to be a crucial element in learning by Carol Kuhlthau (Biggs 2003; Kuhlthau, Maniotes & Kaspari 2007, p. 17–18; Asplund et al., 2012). Attending university pedagogy courses has been a motivating factor to help us gain professional competence and collaborate with other University teachers. The empowering effects of university pedagogical training were studied by Postareff, Lindblom-Ylänne and Nevgi (2008). It was also really important, and in some cases challenging, to motivate new IL teachers. The new IL teachers' feedback has been collected and discussed to empower them, and the library's staff has designed education in collaborative groups (Asplund et al., 2012). The library has also paid attention to actively resourcing pedagogical and other kinds of professional training for all library staff (Iivonen et al., 2007, p. 154-157; Shatona, Asplund, Heino & Helminen, 2012, p. 144-145).

Curricular work is a dynamic process that will naturally continue in the implementation phase. It would also be useful to find out more ways to collaborate with the faculty teachers. Uchiama & Radin (2008, p. 272–273) point out that in higher education, curricular work should be more collegiate and collaborative – rather than everyone acting individually – and they used curriculum mapping as a method to develop the curriculum as an entity and reveal potential gaps and overlaps between courses; they also found developing curricula together increased collegiality. In our IL sessions, TUL always asks the seminar teachers to join the IL session with their seminar groups to share mutual goals.

Results

During the first year of the new IL structure, the hard work resulted in more than 5,000 attendees receiving IL education sessions for bachelor and master's degree students during the academic year 2012–13. The IL education statistics from the first academic year of implementing the new curricula are very interesting; even though the number of teaching hours had been quite large in the previous years, it is worth bearing in mind that the total number of teaching hours was now distributed among students more evenly than before.

Table 1. Information Literacy Education teaching hours by year.

Information Literacy Education	Main library	Dept. Library of Humanities and Education	Dept. Library of Health Sciences	Total
Teaching hours: Academic year 2012–2013	312	237	255	804
Number of attendants*	3,144	1,437	760	5,341
Teaching hours: Academic year 2011–2012	336	112	274	722
Teaching hours: Academic year 2010–2011	367	116	250	733

* Bachelor's and master's degree students only

The second aim of the curriculum reform was to encourage the faculty to choose e-books as text books in the curricula's required reading. The percentage of textbooks also available as e-books grew to 27 per cent of all textbooks in 2013, compared with about ten per cent in 2010.

Compared with many universities in Finland, the University of Tampere differs in that it has started to provide IL education on a large scale in a systematic way. The overall feedback from the students has been very encouraging. IL education is seen as very useful in the first steps of academic life. Feedback shows that students value IL education and understand its relevance to their academic work. The librarians were also pleased to support students' IL skills both right from the beginning of their study life and later on in their studies. The library gained more funding and interesting work opportunities for its staff, and many librarians improved their skills in education. The IL curriculum was included in all study programmes and the content will be renewed regularly in meetings with education planners. Moreover, the novelty value has had an impact on the everyday work of instruction librarians, and brings the library into immediate proximity with other educators at the University. The library has always been an important part of the academic community, but now it has gained more recognition as an educator, too.

Conclusion

The whole process of integrating IL education into all new programmes was an empowering and rewarding experience. A critical factor was cooperation at all levels. TUL now offers 3-step IL education to all degree students at UTA. Curricular work is a dynamic process and it is important to continue the dialogue with students and the schools. The curricula have been written for 2012–2015, but in the implementation phase it is important to reflect upon how TUL has succeeded through careful self-evaluation and assessing student feedback. Fortunately, the library can also better estimate the amount of IL teachers needed for academic semesters. TUL now has continuity and can offer education to students of all nine schools. TUL's staff also has a better understanding of students' IL skills now, and believes that students will graduate to become a quality work-force for their future employers.

The self-evaluation of the UTA's curriculum reform will be conducted during the autumn of 2013. However, TUL should not solely rely on past successes. Instead, it must constantly try to further improve itself: it must re-evaluate and develop its activities, and react to the changes taking place at the University. The most recent curriculum reform was carried out successfully, but there still remains a great deal to do with regard to training researchers to become well-equipped information seekers. International students, visiting scholars and possible distance

learners should also be equipped with good academic information skills. On the basis of the experience obtained from this particular work process, librarians can proudly say that the library can meet even higher expectations with success. TUL and its librarians have proved to be trustworthy partners to the University and its schools in the core processes of research and education.

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