IT Professionals and Archivists Need Common Studies in Digital Archiving

Paula Siitonen, Mirja Loponen, Osmo Palonen; Mikkeli University of Applied Sciences, Finland

Abstract

In this paper, we introduce two new educational programs Mikkeli University of Applied Sciences (MUAS) started in 2005-2008. The target for both programs is to give knowledge and skills on one hand in the Records Management and Digital Archiving and other hand in the Information Technology. Digital contents, electronic records management and digital archiving have been a revolution in RM and archiving since 90's and it has been clear that skills and methods from the paper world will not be enough for the archivist and records manager of today.

To get an understanding in our development there is a need to make introduction to the Finnish educational system, a special view concerning our education of RM and archiving and our background as R&D organization in the Mikkeli district.

The records management education has not been very covering in the higher education institutes in Finland, actually the first assistant professor chair and courses for records management were started in the University of Tampere in the late 1990's as an addition to the educational programs for librarians and information specialists. Traditionally the National Archives Service has trained their own staff: young historians have been employed as trainees and trained internally. Other public sector operations, like 400 municipalities - cities, towns and rural districts - have got their archivists with practices of similar kind. In the recent years there have been some new master programs in other science universities, but they have been based more on history than information science. MUAS programme is still the only one based on Information Technology

Background

Mikkeli University of Applied Sciences (MUAS) has been involved in the research work of digital records and content management since late 1990's. The city of Mikkeli has long been the second biggest archiving core in Finland and there is also a center for microfilming, digitization and preservation of the National library in the city. On the national level also operates the Central Archives of Finnish Business Records. Based on the law one task for Universities of Applied Sciences is to be involved in the regional development. This duty MUAS is carrying out not only by R&D but also by creating a training program for the community currently employing close to 200 employees.

In general the mission of the Universities of Applied Sciences (UAS) is to have close contact with the business and industry in their areas of activities. It is supposed that every UAS cooperate with working life to develop more efficient work flows, develop new processes to help working life and prepare new services and products in its own field of studies. All this is usually done via projects funded by European Union or by government and regional organizations. Quite many results of these projects carried out by MUAS have been demonstrated in the earlier Archiving conferences. The activities in projects have included digitizing process development, metadata definitions, methods and software development for digital archiving and content management. One of the results of the project work is a spin-off company working with ICT services for the medical sector, especially digital radiology. The company Disec Oy was started in 2006. MUAS itself is an application services provider: there are City archives of major cities in Finland, private archives and public listed companies as customers of the trusted repository in MUAS, Often they utilize also the digitization services in where MUAS has concentrated on moving images and sound.

Parts of the project work have been research for the methods and practices for digital preservation and distribution as well as the technical environments needed in those. During this work MUAS also collected information about what kind of skills and knowledge employees in public and private sector need when the transfer from paper records to electronic was essential. One part of the transition was our interest in audiovisual material. Especially the business archives Elka and City archives held also a lot of audio, video and film material: historical films, tapes about meetings and marketing videos among others. By studying how to efficiently digitize them to ensure better usability and still preserve the quality for the use in the future, has given us knowledge for the education as well.

Educational system in Finland
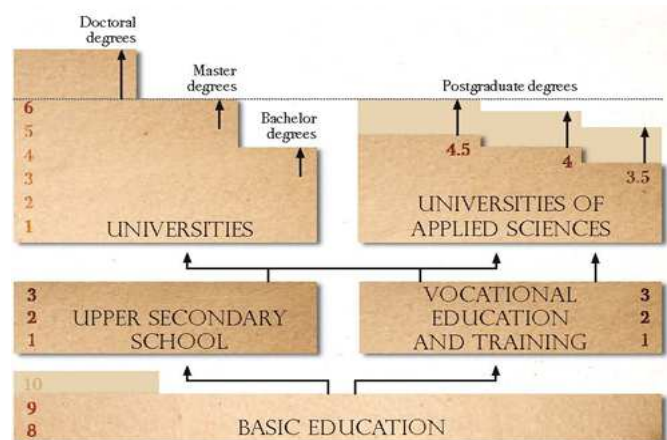
Picture 1: In the Finnish educational system the basic education for all children is similar. The drawing shows that there is an option to get access from vocational education to universities. Graduate degrees in universities of applied sciences have the same level of acceptance as bachelor's degrees in universities. Master level degrees can be reached in both routes.

The Finnish education system includes nine-year basic education (comprehensive school), upper secondary education (vocational or general education) and higher education (universities and the universities of applied sciences).

The higher education in Finland is based on the dual model. There are science universities, some of those old. However, all those universities outside Helsinki and Turku were founded in 1960's and 1970's. In early 1990's the universities of applied science were established by annexing and developing the colleges for trade, technology, nursing, etc. to common higher education institutes in each region. This has given the students different options to reach the educational level needed for higher education.

At the moment, one can apply to university or to the university of applied sciences (UAS) after either vocational or general major high school education. Doctor's degree can be achieved only in universities but master and bachelor's degrees can be done via both routes. UAS's are closer to the everyday working life, more practice orientated whereas universities are more educating researchers, teachers and specialists. To start studies on a master program in UAS a bachelor's degree and three years work experience is required. Master programs in the universities are most often made as part of the youth education immediately after bachelor's degrees.

The Basic degree in UAS is bachelor's degree which is 210-270 study points (ECTS) and means 3,5-4,5 years of full-time study. The requirement for master's studies in UAS is a bachelors' level degree and at least three years of work experience. The UAS Master's studies are 60-90 study points (ECTS) and it takes usually 1.5-2 years to complete for a full time student.
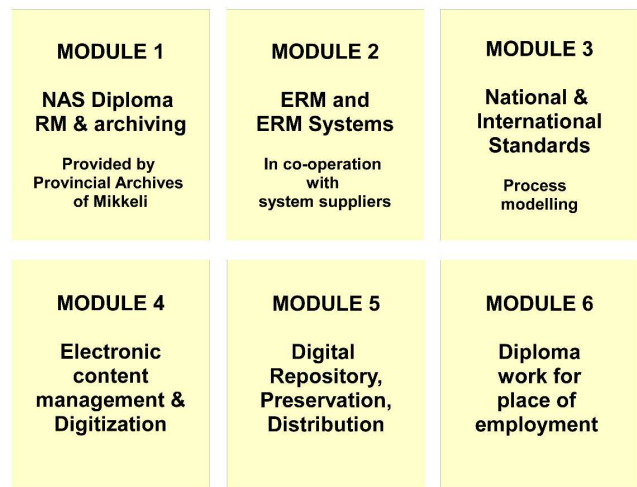
ERMA is a success story

The digitalization of administration and the new tasks and challenges has changed the work deeply also in RM and archiving. In this new situation, education from the paper and pen age is really not enough. There was also a need to learn new methods, processes and way of thinking; forsake the old habits to new operational procedures. The work itself was changed:

- no more routine tasks to carry out, a specialist role needed
- much more independent thinking and problem solving needed
- demand to active participate in the development projects
- more complicated, multifaceted
- continual change and loss of the boundaries
- task have to be able to connect with work in processes
- results can be invisible, however if the work not properly taken care of will cause great problems

Started in 2005 the first post graduate study module did concentrate to digital records and content management. Especially in municipals there ware lack of knowledge how to manage information in electronic format. There were a lot of information systems producing electronic records. The problem was how to archive them, how to prepare electronic records management procedures, how to digitize paper or audio visual information to keep it usable. For that need and with the help of research work was the post graduate specialization studies called "Electronic Records Management and Archiving" (ERMA) developed. A new option to update archivists and record managers knowledge was started.

Extend of ERMA is 30 study points (ECTS) and takes one year with the combination of local and distance learning. Students mostly work at the same time so lectures are held on Friday afternoons and evenings continuing Saturdays, approximately once a month. Students can apply studied matters in their working places straight away. A student can carry out the traditional archive management diploma granted by the National Archives Services as part of the studies. The idea is: "it is essential to understand yesterday to overcome tomorrow". In fact, quite many of our archivists still have hybrid archive

Students are introduced and making themselves familiar with electronic records and case management systems, acquisition and to information management. Related national and international standards are studied as well as processes where the records are created. The ICT skills are updated. Also students learn to prepare to digitize a process, digitize and understand the requirements of digital preservation. The program includes also sessions explaining how digital archives and ERM supports the administration and historical research.

MODULE 1	MODULE 2	MODULE 3
NAS Diploma RM & archiving Provided by Provincial Archives of Mikkeli	**ERM and ERM Systems** In co-operation with system suppliers	**National & International Standards** Process modelling
MODULE 4	MODULE 5	MODULE 6
Electronic content management & Digitization	**Digital Repository, Preservation, Distribution**	**Diploma work for place of employment**

Picture 2. The ERMA program consists of modules.´

The post graduate studies have been very popular since they were started on 2005. Studies have been executed now for the fifth time. 25 students start the program every year and about 90% of the students complete their studies. The amount of applicants has been at least double the course can take in. Studies have been very popular for the record management practitioners even though there have been many participants with ICT background. The students in the earlier four courses have shown that the investment of the time they have used, have often brought them to new positions with wider responsibilities. A year also gives excellent opportunity to build a network of professionals who can support each other in their often lonely everyday work. An important part for both the student and employer is the diploma work that gives very often a solution to a problem experienced in the organization. As a result, about 10 % of the students have found a new job, 70 % improved their career and 10 % continued studies at the upper level. Some typical examples of the student careers:

- a paper archivist to the head of records management
- a filing clerk to the trainer of records management

- municipal archivist to the head of EDRM in a large enterprise.

The program has also created status within the branch. Employers ask if there are any ERM professionals available. On the other hand, many employers pay the students fees and travel costs to keep them. There are no other programs of this kind available in Finland.

Master's degree supported by evaluators

As studies in ERMA do not lead to a degree, developing the complete degree program dealing these matters was started. In Finland master and bachelor degree programs are licensed by the Ministry of Education. Universities have opportunity to propose a new degree program every third year. MUAS made a proposal in 2007 and got the license for new degree program named "eServices and Digital Archiving" (eSDA). The program is still unique and executed only in MUAS. One remarkable support for this program came from the international evaluators of the National Archives Services in 2006. In their report the evaluators, chaired by Sarah Tyacke wrote:

"The Polytechnic at Mikkeli offers a post-graduate programme for digital archiving and is intending to offer a Masters programme with IT in digital archiving, preservation and EDRMS in 2007. The University of Tampere has started in 2005 with Bachelor's and Master's programmes in information studies including optional studies in archival science and records management. These programmes would answer the urgent need for education and training in the new skills of information management for archivists both in terms of EDRMS, information legislation and its application, and digital content and preservation skills where there are few experts and even fewer practitioners available." [1]

Studies were developed on the basis of the earlier ERMA studies. Studies extend in master's degree is 90 study points (ECTS) when it is based on 240 ECTS bachelor's degree. A graduated student gets Master's degree to Business Administration. Compared with ERMA eSDA combines knowledge of information technology to knowledge of records management and archiving. Studies in eSDA are based on two main components: on one hand practices and theory for records management and archiving and on the other hand ICT skills. Students are supposed to understand, be able to define and manage projects when creating content and records management solutions and electric services for the public and private sector. A clear idea behind the studies has been that archivists and record managers need more understanding about ICT and vice versa ICT professionals need more knowledge on archiving and records management to be able to build together archiving systems.

The Master's program was planned to take in half of the students with ICT and half with the archivist background. It has also been so with the two courses already started. The average time to achieve the degree has planned to be two to four years bearing in mind that all students are working at the same time. The target for Master program is to educate people to the management and expert role when designing, developing and implementing systems for the public and private sector. The master thesis is normally made as a new development case in records or content management for the employing enterprise..

eSDA in Finnish Education System

Master's degree in eServices and Digital Archiving (eSDA) is meant to those who have bachelor's degree in either information technology or in records management and have work experience in one field or the other. The idea is to provide the students with the required skills for participating in different kinds of projects in connection with information systems in eServices and digital archiving. It is objective that the graduates are able to redesign processes. In addition, it is objective that the graduates understand how electronic services are produced and know the technology and methods used.

Picture 3. Four of the five Mater's graduated in December 2010.

The degree program in eSDA is unique in Finland. There are no such studies in any other UAS. However, there are some similar studies offered in two universities. University of Tampere has RM and ERM for bachelor level and has been running about five years master program AHJO together with University of Jyväskylä master level specialization studies in Records Management. The students from Tampere have information studies as major subject – on the contrary those, who come from Jyväskylä, can have major subject in history, ethnology or cultural research. Also some related studies are available at bachelor level in the University of Turku.

In Finland, there is not this kind of permanent education at level of upper secondary education. Just now is beginning a development project to make a plan a new vocational diploma in documentation. MUAS has participated in development work actively.

Conclusion

The experience in Mikkeli UAS has shown that there is a need for specialized education for IT used in electronic records management and archiving. The standard IT education will not cover the need.

The programs are developed and the background and short history of those programs has a connection with the R&D work

done in the university. MUAS made first complete Master's degree program in Finland concentrating on electronic services and digital archiving. Motivation to begin with this issue was that working life has faced extremely large changes during recent years: information technology has changed work processes, new tasks have born and tasks have integrated together. It has also been difficult in recent years to find professionals who have good enough knowledge and skills to plan, design and implement services handling information coming from information systems of different kind and addressing electronic preserved information. These studies we introduce are designed together with working life partners during several projects funded by European Union or some national organization. This degree program is permanently now part of study supply in the Mikkeli University of Applied Sciences. We have had a good number of applicants and first graduates with their employers have been satisfied with results.

References

[1]   International Evaluation of the National Archives Service of Finland Publications of the Ministry of Education, Finland 2006:5 http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2006/liittee t/opm_12_opm05.pdf?lang=fi (Read 2010-03-20)

Author Biography

Paula Siitonen received her M.S in Computers Science from the University of Joensuu (1992).She has worked in different tasks concerning further education at Mikkeli University of Applied Sciences Currently she holds a position of Director of Education and is in charge of Department of Information and Media Technology.