Collaboration in International and Comparative Librarianship

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Chapter 21
Digital Library in a Collaborative Context:
Romania and Norway 2003–2012

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ABSTRACT

In this paper, the authors report on collaboration between two universities from 2003 and beyond. The collaborations have been carried out in four main spheres: in the area of Staff training programmes, in the area of Development and research in information literacy, in the area of Developing Models of Digital Repositories and also in the domain of Research in Library Leadership. This cooperation started in 2003 when the authors worked on developing the first Leonardo da Vinci program in the field of continued education, and is still ongoing. The collaborations have been funded by different national and international funding agencies, as well as from the institutions of the authors.

INTRODUCTION

In the globally connected world of higher education today with lists of rankings being presented in the mass media, it is necessary for any ambitious university to compare itself with others, search for best practices and find collaborators with whom to build strengths.

This is what our two universities have done. They are quite different in many respects, although both are medium sized European Research universities with a wide range of subjects; Bergen specializes in marine technologies and development research, while Brasov is strong on forestry and engineering. But this difference in research profiles does not necessarily mean that there are differences in teaching, or in the supports of research and information gathering that are expected from their libraries.

In this paper we will report on an ongoing collaboration between two universities from 2003 and onwards.

The collaborations reported will be from four different fields – but all within library related issues. The collaborations so far are within

- Staff training programmes
- Development and research in information literacy
- Developing models of digital repositories
- Research in library leadership

FIRST COLLABORATION: STAFF TRAINING PROGRAMME

Our cooperation started in 2003 when we worked on developing the first Leonardo da Vinci programmes in the field of continued education. We have carried out 3 Leonardo projects in which our staffs have been trained in different fields of librarianship. In digitizing old and rare books, Bergen was stronger and able to train the Brasov librarians, while the Brasov librarians had more knowledge on writing good bibliographies and handling different kinds of metadata. We also benefitted from staff training in Exceter and Bologna, with partners that Brasov already worked with. As part of this, we collaborated on a book published by the an academic publisher in Norway. (Garnes, Landoy & Repanovici 2006)

Staff training collaboration funded by the Leonardo da Vinci-programme was in place for three years, and during this time we also started our personal collaboration of presenting papers together at international conferences.

We realized that with the similarities and differences of our two universities, we had a unique material for research as we were going along with development of new skills and services in the libraries.

First, we will present our researching and developing information literacy, next the re-

search and development of Open Access and the implementation of an institutional archive in Transilvania University of Brasov, and finally (so far) our research on library leadership.

All these researches and developments have already been presented at different conferences or meetings, or in publications.

SECOND COLLABORATION: DEVELOPMENT AND RESEARCH IN INFORMATION LITERACY

One of the areas that we both needed better services was within the field of information literacy (IL). The following research was done at a time when Bergen had already started the IL-program and development of teaching modules, but still needing supporting research evidence about where to focus. Brasov was just starting to explore IL as a concept.

This research was first presented at the Norwegian Library meeting in 2008.

In the fall term 2007 and spring term 2008 a survey was conducted from the University of Bergen Library, Norway, and the Central Library of Transylvania University, Brasov, Romania. The survey was given to 93 students in Bergen and 100 in Brasov, by handing out similar questionnaires to students in both libraries. The questionnaires had been developed in Rumanian, translated to English and then to Norwegian.

The study was especially designed to explore students conduct and understandings as regards the use of libraries, especially the university library, and the electronic resources provided. At the same time, the results from this analysis were compared with other findings from other studies.

For both surveys, the questionnaires were handed out to students already in the library. This was done to ensure that answers would be coming from students who were actively engaged with the library as a place for learning.

In the Bergen sample, there are 28 males and 60 females (5 have not answered). More than half are between 20 and 25 years, and 20% between 25 and 30. 20 are students of the Faculty of humanities, 16 from the Faculty of medicine, 15 each from Law and Psychology and 13 from the Faculty of Science. Brasov has 68 males and 32 females, 70% between 21 and 30 years, with 48 students in their first study year. 60 are from the Faculty of engineering, 16 study economy and 14 "other field", 6 "law" and 3 sport.

Both cities can boast an excellent public library with large collections, containing also journals and non-fiction. The main libraries have study rooms for pupils and students, and are centrally located in the vicinity of the University. Both public libraries report that students are among their patrons. Does this have any implications for the use of the University library?

The participants of the survey were asked what library they used most often (see Table 1).

The Bergen students will use the one of the branches of the university library most often (95%), but when given the opportunity to tell about all the libraries they use, 30% are also using the public library.

65% of the Brasov students answer that they use the university library most often. 6% use the public library most often, as compared to 3% of the Bergen students. 25% of the Brasov students use both libraries equally.

It should not come as a surprise that students use the University library most often, given the fact that the sample consist of students that are in the library when they are asked to participate in this survey. What is more interesting is the large number of students that report to use both the public and the university library.

Starting by asking university students, in the university library, about their use of university library vs. public library, as for "why" using the university library, there are two questions in the survey that especially cover the reasons for students to use the library (shown in Tables 2 and 3).

92,8% of the Brasov students and 82% of the Bergen students see attendance at the library a prerequisite for acquiring further knowledge, with 7% and 15% respectively disagreeing.

Table 1. What library do you use more often? Percent of users for different libraries.

	BERGEN		BRASOV	
	Nr. respondents	Procent	Nr. respondents	Procent
University library	90	95%	65	65%
Public library	3	30%	6	6%
Both			25	25%

Table 2. Do you deem the attendance at the library a prerequisite for acquiring further knowledge? Numbers and % within country sample.

	BERGEN		BRASOV	
YES	77	82%	90	92,80%
NO	14	15%	7	7%
No answer	2	2%	3	3%

Passing the study time in a pleasant environment is seen as one of the advantages of attending the library for 1/3 of the students, both in Bergen and Brasov. The accumulation of additional knowledge is the main reason for the Bergen students (34%) and the least favoured advantage for the Brasov students (16,6%). Interestingly enough, the appeal to the librarians and the library services is seen as an advantage only for 19% of the Bergen students but for 28,5% of the Brasov students, and easy project resolution is seen as an advantage for 23,6% of the students in Brasov and only 19% in Bergen.

We can explore the question of documents in the University library a little further, as shown in Tables 4 and 5.

Table 3. Which are the advantages of the attendance at the library? (Multiple choice) Numbers and % within country sample.

	Bergen		Brasov	
Accumulation of additional knowledge	79	34%	38	16, 6%
Easy project resolution	45	19%	56	23,6%
Appeal to the library services	40	17%	67	28,5%
Passing the study time in a pleasant environment	67	29%	72	31,3%

Table 4. How does the documents of the university library meet your study needs in your field? Numbers and % within country sample.

	Bergen		Brasov	
Very well	44	47%	15	16%
Passable	47	50%	39	37%
Badly	0	0	38	39%
Blank	2	2%	8	8,0%

Table 5. Which are the documents you would rather study?

	Bergen	Brasov
Printed	23%	25%
Electronic	7%	18%
Both	67%	56%
Blank	1%	1%

97% of Bergen students agree that the documents of the university library meet their study needs in their field in a very good (47%) or passable (50%) manner. In Brasov the number is 53%, while almost 40% report that the study need is met in a badly manner.

In Bergen 67% would rather study both electronic and printed documents. 23% would like

only printed documents, and 7% would prefer to only use electronic documents. In Brasov 56% would rather study both electronic and printed documents. 25% would like only printed documents, and 18% would prefer to only use electronic documents (see Table 6).

When asked about where to go to find information in order to solve a problem concerning a theme for a prject, 52% of the Bergen students answers that they will go to the Internet, while 22% will go to the library catalogue and 16% to the library databases.

From Brasov the answers from 43% of the students is that they will go to the Internet, while 37% will go to the library catalogue and only 20% prefers library database.

In the OCLC-survey from 2005 89% of college students across all regions answered that they will go to an internet search engine to start an information search. (OCLC 2005). The numbers may not be directly comparable, since we have asked about the information search especially for a project or a subject, and not information search in general.

Almost half of the students do not use the internet search engines as their first information point when exploring subjects. In line with this, students both in Bergen and Brasov are quite optimistic on behalf of the printed book, the traditional library and librarians. When asked for their opinion and degree of agreement with different statements

Table 6. Documentation sources: Suppose you have a theme for a project. In order to solve the problem, you start by a documentation upon the subject. Which are the documentation sources you choose?

		Bergen	Brasov
Library catalogue	25	22%	37%
Library databases	19	16%	20%
Internet	59	52%	43%
Others	7	6%	
Blank	2	2%	

about future scenarios, they strongly disagreed with the ones that predict disappearance of books, libraries and librarians (see Table 7)

Statement a) The printed book will disappear, for the future we will only access electronic documents: 71% from Brasov disagrees, and 60% Bergen, with 19% and 3% agreeing.

Statement b) The traditional library will disappear; there will suffice the computer stations with access to the Internet and the digital library. 69% from Brasov and 57% from Bergen disagrees. 16% from Brasov and 9% from Bergen agrees

Statement c) The librarians' role will turn into the one of web-designers and into information organizers on the internet: 69,8% and 52% disagrees and 8% and 5% agrees.

If we look at the scales we have been using, we see that total agree = 6, and total disagree = 1. The answers from the Brasov students are concentrated on the 6+5, and 2+1, with quite few using 4+3, while the Bergen answers to a much larger extent will be at 4 and 3. This may be an indicator that the Brasov students feel this to be more of an "either – or" situation, while the Bergen students expect the future to contain "both"(see Table 8).

Impact from the Findings on Planning the Teaching of Information Literacy

The results from all over the world seem to be similar in some respects. For the planning of teaching of information literacy one note the fact that both the students in Norway and in Romania prefer the Internet as information source accessed from home. At the same time they are not acquainted with the rigorously scientific documentation sources, with the academic literature, with the scholar internet, with the invisible web, with the evaluation of the resources, with the ethic notions, with plagiarism and the communication of the results in the scientific research. This should therefore be taken into consideration when planning further work in the field.

Table 7. The future of the book, libraries and librarians

	Bergen			Brasov		
	The printed book will disappear, for the future we will only access electronic documents	The tradi-tional library will disap-pear, there will suffice the computer stations with access to the Internet and the digital library	The librarians' role will turn into the one of web-designers and into information organizers on the INTERNET	The printed book will disappear, for the future we will only access electronic documents	The traditional library will disap-pear, there will suffice the computer stations with access to the Internet and the digital library	The libra-rians' role will turn into the one of web-designers and into information organizers on the INTERNET
Tot agree	2,1%	2,1%	2,1%	6,4%	8,2%	3,4%
5	1,0%	7,5%	3,2%	12,8%	7,5%	4,5%
4	12,9%	9,6%	8,6%	4,1%	5,2%	7,7%
3	20,4%	18,2%	25,8%	5,4%	10,3%	14,6%
2	26,8%	30,1%	22,5%	41,5%	37,7%	35,3%
Tot disag	33,4%	26,8%	30,1%	29,8%	31,1%	34,5%
Blank	1%	5,3%	7,5%			
N=	93	93	93	100	100	100

Table 8. University library documents are enough for your study needs in your field?

	BERGEN		BRASOV	
	Nr. respondents	%	Nr. respondents	%
Very much	32	34,2	15	16
Much	12	12,8	39	37
Medium	47	48,6	38	39
Unsatisfied	2	3,6	8	8

Understanding how students navigate this maze of resources is important for developing and assessing pedagogy designed to instruct students in library usage. Students are more and more Web-savvy as many of them having been brought up around computers and the Internet. However, they matriculate with a diversity of computer and Web-searching skills and experience. Students may not have been exposed to library resources, or not be aware of which resources a library might have, or how to make use of them. It is therefore of interest to try to understand what characteristics will make one student branch out and explore library resources, while another one might not. (Kibirge & DePalo 2000).

A study of undergraduates showed that they looked for the fastest way that would lead to satisfactory results when doing research, going for electronic information sources first (Valentine 1993).

From this research, web-based teaching materials in information literacy has been created and developed in both our universities, some of which will be shown here.

Information Literacy Tutorials

Bergen University Library

Search & Write is an online course which aims to help students with thesis writing. It shows a number of different methods to help students get started with writing their thesis and a number of different information search methods.

The writing and search processes for students and researchers are very similar. The start point for the search process is often a feeling of wonder. There is something one wants to learn a great deal more about. There is something one wants to research. This process of curiosity, doubt and wonder is the driving force behind the need to find information on the selected subject.

Writing academic texts can be described as being a process of different phases.

The phases change from the point in time when one only has a vague idea about the content of a thesis to the point in time when one has a clear hypothesis which the writing can be based around. Brainstorming, free writing, speed writing and outline can be used to help one get started with writing.

The reasons why information is needed will vary with each stage. One will therefore need different types of sources and perhaps also evaluate information based on different sets of criteria at different stages (Figure 1).

(2012 comment: Since 2008, the Søk og skriv/ Search and write has gone through several evaluations with following updating and further developments)

Transilvania University Library

Transilvania University developed an information skills program integrated into the first year engineering subject **"**Documentation techniques". As a problem based learning subject it requires the students to work through and report on an engineering project. Over the past four years the program has transformed radically as a result of applying an action research framework which is primarily concerned with continual improvement and change in practice. Currently the information skills program consists of a student-led orientation tour, an integrated subject web page (developed using *Research and Write* tutorial).

"Transilvania" University of Brasov-Model of Engineering Learning Research and Write Tutorial

Search and write tutorial is an online teaching model. The web pages of tutorial are presented below. Every theoretical page has practical exercises (Figure 2).

The actual uses in teaching of information literacy of these modules differ from the two universities, both with regards to who is doing

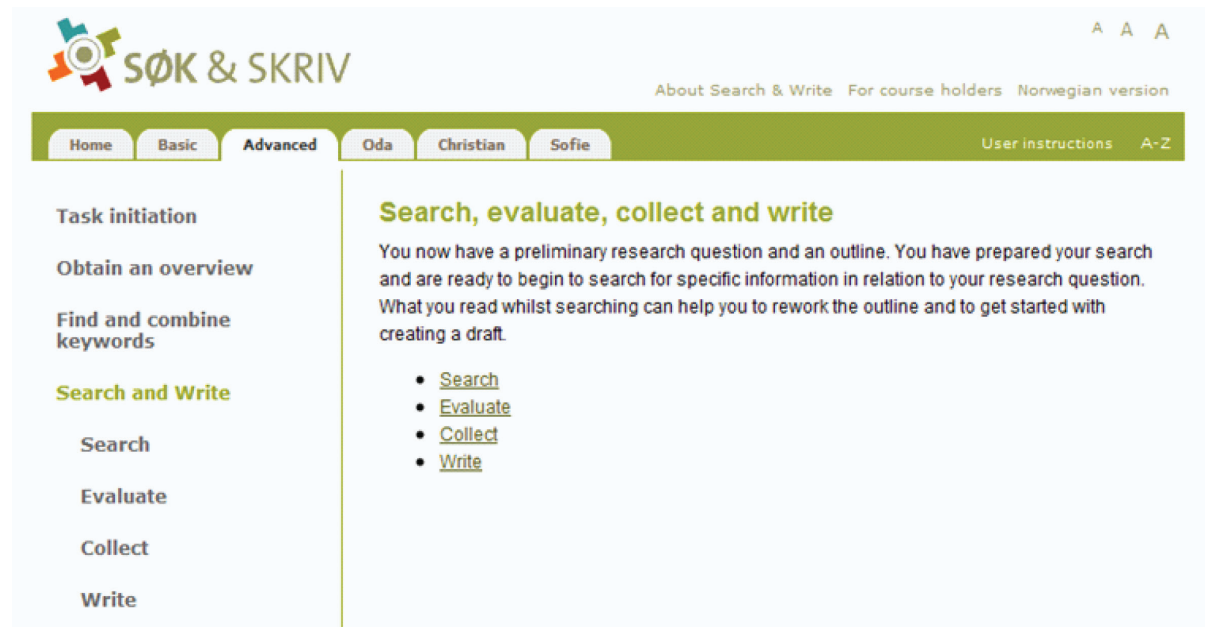*Figure 1. Bergen University online tutorial*

Figure 2. Brasov University online tutorial

the teaching, and as to how it is conducted. In Bergen the library plays the most important teaching role, while in Brasov the subject professors are the ones that use the web based teaching material and teach information literacy to students.

THIRD COLLABORATION: DEVELOPING MODELS OF DIGITAL REPOSITORIES

Transilvania university digital repository was build following the Bergen experience.

In the following, there is a presentation of the digital repository developed by the Bergen University, Norway called BORA-Bergen Open Research Archive (see Figures 3-7). (This presentation was done in professor Repanovici's phd. in Marketing).

The Bergen University in Norway, partner in many of our projects, developed an institutional repository within a pilot project in collaboration to the University of Glasgow having the following objectives:

- Long-term conservation of the scientific production of the university
- Open access to these documents on the Internet
- The working team was the department of the technology of information and the library.
- The software used was Dspace. The choice was motivated by the following:
  - Digital materials in any format can be loaded
  - Long-term stocking
  - Internet distribution
  - Long-term saving and use

The informational model is ensured by the research community and organized in collections and then in individual files, namely for each faculty, department, researcher.

The model is easy to use, to add content, to navigate and to find the content.

Figure 3. Image from the institutional repository. Repository's organizing manner.

Figure 4. Image from the institutional repository. Document's archiving. Step 1

Figure 5. Image from the institutional repository. Document's archiving. Step 2

Figure 6. Document's archiving. Step 3
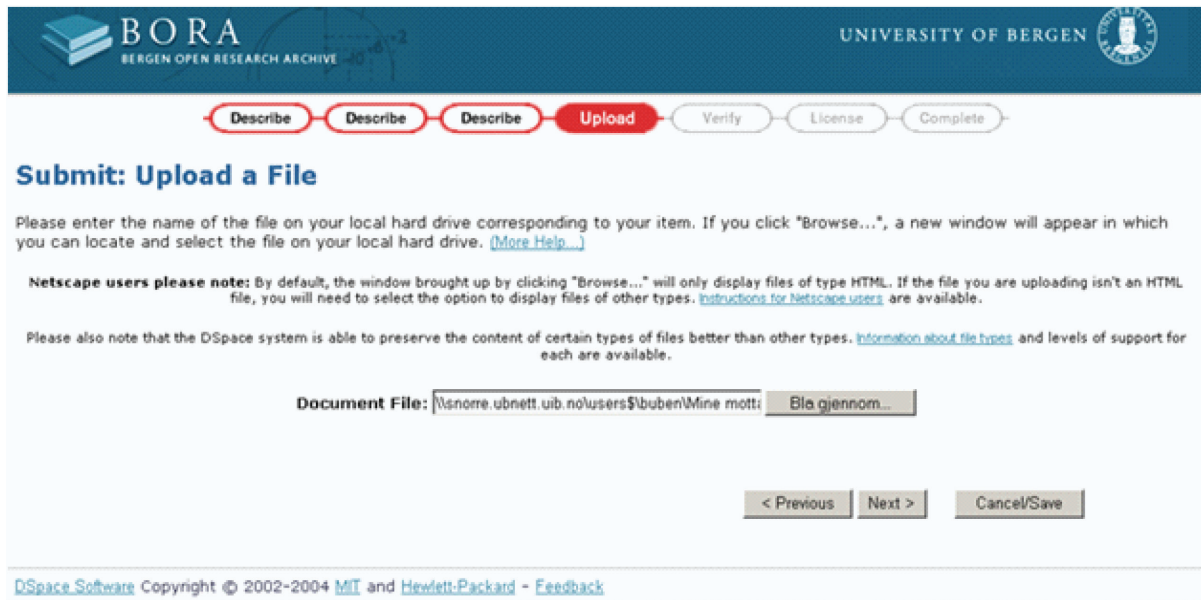
Figure 7. Full loading of the document in the repository

The Dspace software, the open source used by the Bergen University offers the capacity of stocking and saving the following types of documents:

- Articles, pre-prints, e-prints;
- Technical reports;
- Research reports;
- Conference proceedings;
- Video, audio-video materials, images;
- Teaching materials;
- Digitalized materials;
- Bachelor degrees, master's degree, PhD theses (Figure 8)

Transilvania University of Brasov is the first to implement an institutional repository in Romania.

Figure 8. Thesis submission workflow
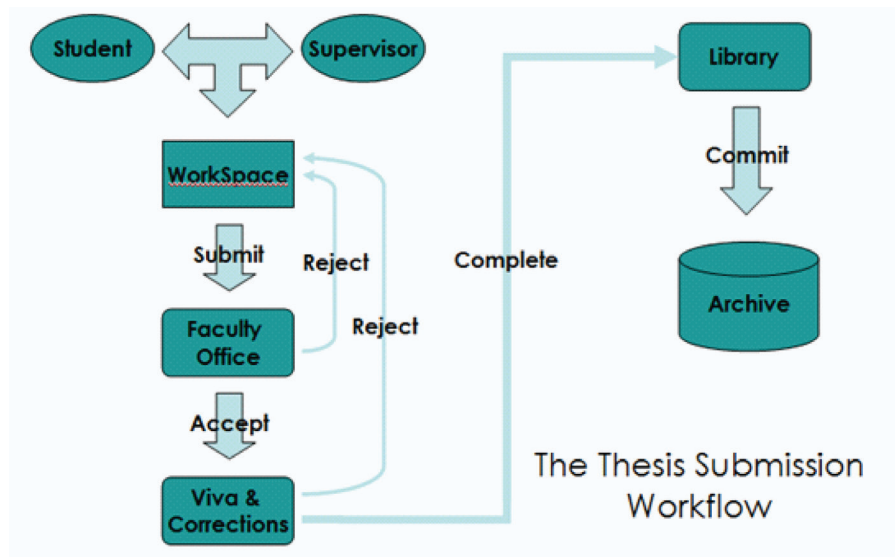
THE FOURTH COLLABORATION: CHALLENGES FACED (OR NOT) IN LIBRARY LEADERSHIP

Finally, we would like to report on a collaboration activity that is research only, at least so far. This was presented at the BOBCATSSS conference in January 2012 in Amsterdam. Mainly, it deals with Norwegian library leaders and their assessment of different kinds of challenges, but we also look at responses given from a group of Romanian academics to similar challenges to compare from the two different perspectives.

Background for the Leadership Study

250 Norwegian library leaders working at different levels in the libraries answered questions about what they perceive as challenges in the future. The analysis shows how leaders, both in academic libraries and in public libraries rate these challenges for their libraries, as well as for the library leaders themselves.

This research is supplemented by findings from two studies made at Transilvania University of Brasov, Romania, where surveys of academics

and their thoughts on open access publishing will serve as examples of a typical situation.

The Norwegian part of the data comes from an electronic survey sent out to all municipal, county and academic libraries in September 2011, the Brasov research was done with an on-line questionnaire, accessed from the research platform of the Faculty of Economic Sciences.

What Are the Results from the Leaders Being Asked about Challenges?

Of the 243 Norwegian respondents, 153 (63%) worked in municipal libraries, 78 (32%) in Academic libraries and 12 (5%) in county/regional libraries. The county/regional libraries are in charge of the high school libraries, but do not normally have book collections or single users.

They were all asked about challenges. The question was formulated: "What significance do you think the following challenges will have for your library and for you as a leader in the future?". Answers were given in one column for the library, and one for the leader. The number of responses differed between 178 and 201 to the different questions.

In Table 9 we see how the leaders rated the significance for themselves and their libraries. The numbers are in %.of leaders rating each challenge. The possible answers were "No significance", "Low significance", "Medium significance", "Some significance", "High significance" and "Don't know/Nor applicable" (N/A) .

For this paper the responses chosen were "High significance", "Low" or "none" were combined in one category called "Low" and the results given for both leaders and libraries. Then the "N/A" was estimated as an average. Most of the N/A's were quite similar for both "Leader" and "Library" - when there were major differences they are both being shown in Table 9.

When we look at what the leaders perceive as challenges for themselves, we see that they rate economy as the most important challenge for themselves, and the second highest for the library.

Technological changes are rated highest for the library, and the second highest for themselves, while Marketing impact and value rates as the third most important challenge for both leaders and libraries.

At the same time it is fascinating to see the differences between how the leaders rate the challenges for themselves against the challenges for the library. The same set of challenges have much higher significance for the libraries than for the leaders, and there is a slightly larger percentage also saying "Low or no significance" as seen for the leaders compared to the libraries. We must remember that it is the same leaders who answer both questions, about their rating of the challenges for themselves and for the library.

It is quite obvious that the challenges are rated as more serious for the libraries than for themselves. We can see this both in the relatively lover

Table 9. What significance do you think the following challenges will have for your library and for you as a leader in the future?

	Leader	Leader	Library	Library	Li/Le
	High	Low	High	Low	N/A
Technological changes	66,7	4,5	87,1	0,5	0
Use of social media	34,9	9,2	50,20	4	0
Recruit and keep	53,3	8,8	59,80	2,5	3 6
Development of leader competences	55,3	6,6	53,30	4,5	1,5
Accrediting	16,8	13,6	15,2	9,2	40
Quality development and -management	60,9	2,1	54,9	3,8	4,5
Userinvolvement and web 2.0	63,6	8,6	45,7	4,3	3 6,5
Economy	71,7	4,3	81,8	0	1
National qualification framework	12,6	13,7	16,9	7,2	25
Open access	26,8	13,6	33,3	9,6	13,5
E-books	42,2	10,8	59,7	3,3	1,5
Bibliometrics etc	11,3	28,5	12,8	21,3	22,5
Marketing value and impact of library	64,6	5,6	68,5	3,4	2,8
Information literacy for users	36,3	11,2	53,8	4,3	1,1
Digitizing own material	18,4	29,7	26,4	21,9	4,2

proportion of the "High significance"-answers, but also in the relatively higher proportion of "Low significance".

What Does this Mean?

The technological challenges are global in the library world, and concerns not only computers, but also the other different gadgets on the market. Norway is considered a technologically advanced country where most people have access to computers, internet and mobile phones. At the same time, the municipal libraries often consider themselves to be special guardians for the disadvantaged members of the public, and this can also be part of the reason why library leaders see technology as a challenge.

Although Norway has not been hit hard by the financial turbulence of 2010-2011, there are still some economic worries. Some municipalities have reduced the budgetary amounts allocated to the libraries; some academic libraries are facing the exponential growth in cost of the electronic journals. For all libraries, there are challenges in keeping up the activities with the threat of reduced resources.

This is probably also one of the reasons that "Marketing the value and impact of the library" is seen as a special challenge for libraries and leaders today. Maybe it is on the background of the economic challenges it is seen as especially important to inform both the patrons and the politi-cal stakeholders, even though libraries normally have a high standing in the community.

Comparing Two Challenges for Academic and Municipal Libraries

In Table 10 we look closer at the ratings for two of the challenges – Open access and Bibliometrics. They both had quite high N/A-scores in Table 9, and we wanted to see if these issues were considered to be more important for academic libraries than for municipal libraries. Since the ratings in Table 10 showed to be higher for libraries than for leaders, we look closer only at the how the leaders rate the significance of the challenges for the libraries.

We see here that there is a distinct difference between the ratings from the leaders of the academic libraries and the municipal libraries. The academic libraries have higher "high significance" and lower "Don't know/NA"-ratings, and vice versa for the municipal libraries.

The Brasov Surveys

There is still only about one third to half of the academic library leaders that rate these two challenges as of high significance for their libraries in the future. We can take a look at how some academics rate these challenges by looking at the results from the surveys done of academics in Brasov, Romania.

Table 10. Significance of two challenges: Academic or municipal library. Response numbers.

	Some Sign	High Sign	Don't /NA	Total
Open access – significance for library: Academic library	19	33	1	61
Open access – significance for library: Municipal library	26	22	20	97
Bibliometrics – significance for library: Academic library	29	22	1	62
Bibliometrics – significance for library: Municipal library	14	1	38	98

When the academics answer questions about the services of the library, they find that the documents offered by the university library do not satisfy their study necessity - the mean of the "satisfaction of the study necessity of the documents of the university library" is 2,28 on a scale from 1 to 5.

The acquisitions of the university library are not done strategically or according to rules for covering all study fields. In most cases, the development of the library's collections is based on documents bought by the members of the community with funds from grants they have won. Their preferences are equally for printed and electronic documents. From 2004, the university subscribed to databases. The first database and the one with continuity is Springerlink. The acquisition criterion of this database was the low price and cross-disciplinary character. The members of the academic community were pleased with this product. Yet, there is still dissatisfaction because these products can be accessed from the university's network only. The majority want access to be possible from home. That may be why the respondents accessed databases in a proportion of 48,1% a year.

The survey also shows that members of the academic community from Transilvania University have little information on open access journals and the publication in this regime. The majority of those who know open access journals have short or medium length of work in the university. In the part of the survey that looks at institutional digital repositories, 96,3% agrees that "the institutional digital repository represents the essential condition for the international scientific research" and 91,5% agrees that it is "necessary to constitute an institutional digital repository".

Academic Library Leadership Challenges

Norwegian library leaders are facing several challenges, and the ones that are rated with the highest significance are challenges that come from the outside – economy, technology – or marketing to the surroundings. Some of the challenges – open access and bibliometrics among them - are seen as more relevant for the academic libraries, but even in the academic libraries they are seen as having limited significance. When we compare the ratings from the Norwegian library leaders to a survey of a group of Romanian academics, we see that the academics are much more concerned about open access and bibliometrics. Probably this would also be the case with Norwegian academics – if so the academic library leaders are out of touch with an important group of stakeholders. This may be the biggest challenge of all.

CONCLUSION

The overall conclusion to the collaboration between our two universities is that the mutual work has led to further development of both libraries. The exposure to ideas and the support from each others, along with the possibilities to get to know the other's library, has made a fertile ground for the exchange of ideas and suggestions benefiting not only the staff that works with the collaborations, but also different kinds of patrons.

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