

Students as Users of Digital Libraries

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Abstract: We present the results of a survey of one category of users of Polish digital libraries, namely students. This group accounts for 20% of all users. We begin by describing the way in which Polish students make use of digital libraries: how often they visit such a library, how long a typical session lasts, what materials are used most frequently, and what percentage of the total literature they use comes from digital libraries. This is followed by results concerning students' evaluations and expectations of digital libraries. They were asked, among other things, to assess the mechanisms available for search and retrieval, and the quality of the scans. The degree of trust accorded to digital publications was also investigated.

Keywords: digital libraries; library users; Polish libraries; students; survey

1. Introduction

Students make up one of the groups of users most interested in the development of digital libraries. Although their interest is limited to relatively small parts of the collections, their expectations are very refined – they expect, to a greater degree than other types of digital library user, to be able to access publications at any time and in any form. For this reason the evaluations of digital libraries made by students have a different character and significance than those obtained from other groups of users.

2. Exploratory Survey

The research whose results are presented here was preceded by an online exploratory survey carried out in late 2008 and early 2009 (survey questionnaires were available on Polish digital libraries' sites from 1 October 2008 to 30 March 2009). The research was based on a questionnaire containing

16 questions, on subjects which included ways of using the library, reasons for using it, and which types of publications were most often used. Use was also made of statistical data collected on the library's server. The survey enjoyed a relatively high level of interest, and 1025 completed questionnaires were returned. An important result of this survey was the identification of three key groups of digital library users: hobbyists, students, and academics.

3. Targeted Survey – Methodology

It was decided to use the groups of key users, identified in the exploratory survey, in further research based on questionnaires addressed to specific persons (those who disclosed their e-mail addresses in the first survey and those corresponding with library administrators, a total of 637 persons; and those with accounts with the Digital Library of Wielkopolska, a total of 9274 persons).

The second, targeted survey was carried out in 2010 (e-mails were sent to 9911 persons in September 2010). Its purpose was to make an assessment of digital libraries. However it deviated somewhat from the typical questions of the type: What difficulties do you encounter? How do you rate the search possibilities? etc.

4. Targeted Survey – Findings

A total of 540 replies were received (slightly more than 5% of those to whom the questionnaire was sent). Respondents included 322 in the hobbyists group, 110 in the academics group, and 108 in the students group. Approximately 60% of respondents provided explanations and comments, often very extensive.

4.1. Characteristics of the survey group

Students (108 persons) made up approximately 20% of all respondents in the targeted survey. In the exploratory survey they also accounted for 20% of respondents (193 persons).

Subject of study (as formulated by respondents)	Number of replies (targeted survey) N=108	Percentage
Humanities and social sciences	65	60.1%
History	33	30.5%
Law	5	4.6%
Library science	5	4.6%

Table 1. Students responding to the targeted survey, by subject of study.

Use of digital libraries by students (respondents to the targeted survey)

More than 65% of students most often use the Digital Library of Wielkopolska, while almost 14% most often use the Silesian Digital Library. Another eight libraries were mentioned by several persons each.

The table below gives the frequency of use of digital libraries by students responding to the targeted survey and exploratory survey. For comparison we give the results of a study by Sheeja (2010) among Indian students.

Frequency of use of digital library	Number of replies (targeted survey) N=108	%	Number of replies (exploratory survey) N=193	%	Sheeja's survey N=225
daily	7	6.4%	13	6.7%	17%
once a week	37	34.2%	N/A	N/A	26%
several times a week	0	0.0%	26	13.5%	28%
once a month	37	34.2%	N/A	N/A	N/A
several times a month	0	0.0%	64	33%	N/A
often	0	0.0%	N/A	N/A	N/A
very often	0	0.0%	N/A	N/A	N/A
depends on needs	7	4.5%	N/A	N/A	N/A
rarely	16	14.8%	37	19.2%	N/A
first time	1	0.9%	41	21.2%	N/A
occasionally	N/A	N/A	N/A	N/A	29%
regularly	3	2.7%	N/A	N/A	N/A
no reply	0	0.0%	12	6.2%	N/A

Table 2. Frequency of use of a digital library by responding students – comparison of results between the targeted survey, the exploratory survey and Sheeja's findings.

In other studies it has been shown that 3.9% of undergraduate students make daily use of digital libraries, and 5.4% of graduate students; 33.2% of undergraduates and 50.4% of graduates use them once a week, and 42.8% of undergraduates and 31.8% of graduates once a month. Other respondents used the library once or twice, or never (Liu and Luo, 2011). The values for some types of responses in the different surveys are similar, e.g. daily use in the Polish surveys and Liu and Luo's (min. 3.9%, max. 6.7%), although Sheeja's results deviate markedly from these (giving 17%). Also similar is the percentage of respondents making use of the library once a week (34.2% in the Polish

studies, 33.2% according to Liu and Luo) and once a month (34.2% and 31.8%). It is possible that these similarities are not accidental and indicate certain patterns in the frequency of use of digital libraries by students (about 5% use them daily, and about a third once a week). These are only conjectures and require further more detailed study.

Time spent working per week	Number of replies	Percentage
1h or less	30	27.7%
over 1h to 5h	43	39.8%
over 5h to 10h	11	10.1%
over 10h	8	7.4%
no reply	16	14.8%

Table 3. Time per week spent working with a digital library among students responding to the targeted survey (N=108).

Type of document	Very often	Sometimes	Rarely	Never
Archives	55 (50.9%)	28 (25.9%)	13 (12.0%)	11 (10.1%)
Newspapers and magazines (19 th c. – 1939)	42 (38.8%)	30 (27.7%)	20 (18.5%)	15 (13.8%)
Monographs	39 (36.1%)	28 (25.9%)	23 (21.2%)	18 (16.6%)
Textbooks	33 (30.5%)	28 (25.9%)	24 (22.2%)	23 (21.2%)
Maps	8 (7.4%)	23 (21.2%)	26 (24.0%)	50 (46.2%)
Photographs and drawings	11 (10.1%)	26 (24.0%)	35 (32.4%)	35 (32.4%)

Table 4. Frequency of use of various types of document by students responding to the targeted survey (N=108).

For how long have you been using digital libraries?	No. of replies N=108	Percentage
1 year or less	24	22.2%
over 1 years to 2 years	27	25.0%
over 2 years to 3 years	22	20.3%
over 3 years to 4 years	15	13.8%

over 4 years to 5 years	10	9.2%
over 5 years to 6 years	7	6.4%
over 6 years to 7 years	1	0.9%
over 7 years to 8 years	1	0.9%
when writing master's thesis	1	0.9%

Table 5. How long students responding to the targeted survey have been using digital libraries.

4.2. Evaluation of digital libraries by students

% of sources used	Number of replies (targeted survey) N=108	Percentage
10% or less	30	27.7%
over 10% to 30%	47	43.5%
over 30% to 50%	16	14.8%
over 50% to 80%	11	10.1%
over 80% to 90%	2	1.8%
over 90% to 100%	0	0.0%
other replies	2	1.8%

Table 6. Replies by students (respondents to the targeted survey) to the question: What percentage of all the materials you need for your studies come from digital libraries?

	often	sometimes	never
Has a digital library enabled you to reach sources which you would not otherwise have found or which would not have been accessible other than through a digital library?	67 (62.0%)	36 (33.3%)	5 (4.6%)

Table 7. Responses by students (responding to the targeted survey) to a question relating to the advantages of digital libraries (N=108).

	Yes, certainly	No, in some situations I have to use the original	No, I always have to use the original
For you, can the digital publications available in digital libraries take the place of printed materials?	60 (55.5%)	43 (39.8%)	5 (4.6%)
	Yes	It depends	No
Do you have the same confidence in citations of sources in digital form (stating the URL) as in citations of printed works?	60 (55.5%)	36 (33.3%)	12 (11.1%)
Do you think that theses (bachelor's, master's, etc.) and students' publications should be published and placed in a digital library?	60 (55.5%)	32 (29.6%)	16 (14.8%)

Table 8. Responses by students responding to the targeted survey (N=108) to questions concerning the acceptability of digital libraries.

Question	excellent	very good	good	satisfactory	unsatisfactory
reliability	7 (6.4%)	30 (27.7%)	47 (43.5%)	20 (18.5%)	4 (3.7%)
ease of use	9 (8.3%)	38 (35.1%)	41 (37.9%)	17 (15.7%)	3 (2.7%)
richness	0 (0.0%)	10 (9.2%)	41 (37.9%)	35 (32.4%)	22 (20.3%)
retrieval	3 (2.7%)	20 (18.5%)	39 (36.1%)	37 (34.2%)	9 (8.3%)

quality of scans	11 (10.1%)	41 (37.9%)	44 (40.7%)	11 (10.1%)	1 (0.9%)
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Table 9. Replies from students (N=108) to the question on how they rate the resources of the digital library, ease of use, reliability, retrieval, and quality of the scans.

Task	Priority	Important	Worth doing	No reply
Increase the number of publications in digital libraries	83 (76.8%)	18 (16.6%)	2 (1.8%)	5 (4.6%)
Improve retrieval	20 (18.5%)	30 (27.7%)	17 (15.7%)	41 (37.9%)
Improve subject searching	14 (12.9%)	22 (20.3%)	12 (11.1%)	60 (55.5%)
Improve full text search	17 (15.7%)	16 (14.8%)	18 (16.6%)	57 (52.7%)
Improve scan quality	6 (5.5%)	17 (15.7%)	34 (31.4%)	51 (47.2%)

Table 10. What task do you think digital libraries should regard as the most important at the present time? Please indicate the three most important (targeted survey, students, N=108).

The clearly most important task (priority) for responding students was increasing the number of digital publications, while improvement of retrieval and improvement of scan quality were also considered important. The least interest was expressed in improving subject searching.

Reply	Number of replies (targeted survey N=108)	Percentage
yes	67	62%
no	41	38%

Table 11. Replies by responding students to the question: Do you think emphasis should be placed on the rapid development of digital libraries at the cost of traditional libraries (primarily academic libraries)?

Type of reply	Number of replies (targeted survey)	Percentage
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	N=108	
No, although digital publications will dominate	19	17.5%
No, printed publications will still dominate	72	66.6%
Yes, it will happen in the next few years	17	15.7%

Table 12. Replies by students (responding to the targeted survey) to the question: Please give your opinion on the statement that “in about 10 years’ time academics and students will be using exclusively digital publications available online.”

5. Conclusions

The survey reported here consisted of two parts. The first provides information about users and the manner in which they make use of the digital library. The second concerns their evaluation of existing libraries and prospects for their development. While obtaining information about respondents is a natural part of every survey, here it also served a control function: based on the answers given in this section, an assessment was made of respondents’ truthfulness. Because the responses did not deviate from the expected results and from the results of the pilot study, it was concluded that the responses are largely reliable.

The most important questions in the second section included those concerning what percentage of the materials respondents use are publications found in digital libraries. Students generally make use of a limited number of sources. Their memory is significantly better than that of older people, and so their answers can be considered to be a better approximation to reality. We estimate that probably about one-fifth of all materials used by all students for educational purposes come from digital libraries: our minimum estimate is approximately 15%, and our maximum estimate about one-third. Because 70% of respondents indicate ranges in which one of the end-points (upper or lower) is given as 10% of sources, and around 25% of respondents indicate ranges with an end-point of 50%, this also confirms that on average probably around one-fifth of materials used by students in total are in digital form.

Another important finding is that more than 60% of students report that they very often would not have found or gained access to significant materials had it not been for digital libraries. Another 30% state that such situations occur occasionally. This information reveals how important the existence of digital libraries is for the quality of education.

A final and somewhat surprising conclusion is that, in spite of the general acceptance of digital libraries as sources of publications, many students have a limited degree of confidence in digital publications. One in ten students stated

that they do not have the same degree of trust in citations of digital works as those of printed works. Nonetheless, one in three said that this is conditional on various factors, while the remainder – more than half of the total – report that they consider a digital citation to be equally credible as a printed one.

References

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