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Evaluating Polish digital libraries from the perspective of non-academic users

Miroslaw Górny and John Catlow

Department of Information Systems, Adam Mickiewicz University, Poznań, Poland, and

Jolanta Mazurek

The Kórnik Library of the Polish Academy of Sciences, Pałac Działyńskich, Poznań, Poland

Abstract

Purpose – The purpose of this paper is to describe and evaluate the role played by digital libraries in Polish society, particularly in relation to users who are not in education or professionally engaged in academic work.

Design/methodology/approach – Results are presented from a survey of non-academic users, identified as one of the key groups of digital library users in an exploratory survey in 2008-2009. The targeted survey was carried out by sending e-mails to persons who had supplied their addresses in the first survey or had set up accounts with the Digital Library of Wielkopolska. Analysis was also made of e-mail correspondence between digital library users and librarians, and data from digital library server logs, during 2008-2013.

Findings – The research provided three interesting results. The first is that the creation of digital libraries in Poland has caused a significant number of people to pursue an interest in genealogical or local historical research. The second result is that the evaluations of digital libraries made by non-academics do not differ significantly from those made by students and academics. The third is the fact that at present, approximately 50 per cent of digital library users in the non-academic category are over 50 years of age.

Originality/value – This is the first comprehensive study on the use of digital libraries in Poland by non-academic users. It shows what role digital libraries play, and to what extent, in the stimulation of cultural activity in Polish society.

Keywords Evaluation, Poland, Digital libraries, User studies, Key users, Non-academic users

Paper type Research paper

Introduction

Digital libraries in Poland came into being, and seem to be developing, in a manner which can hardly be described as planned. The first such library, the Digital Library of Wielkopolska, was set up in 2002 as an experimental project, and others developed soon afterwards. Poland currently has 88 digital libraries, most of them being run as a part of traditional libraries. Total collections have come to exceed 1,500,000 publications. The Digital Library of Wielkopolska holds approximately 200,000 publications and, since 2004, has recorded around 30 million visits.

When creating digital libraries, Polish librarians apparently did not have a specific user in mind. Consideration was given instead to protection of the collections.

Digitization was primarily carried out on what was on a library's shelves and what could legally be made available on the Internet. This means that Polish digital libraries contain chiefly books published in the nineteenth century and before World War II. Newspapers and magazines from those periods were also digitized. This is particularly significant, as this part of the libraries' collections is subject to rapid degradation due to the acid paper effect, while also being of exceptional importance to researchers. Newspapers have never before been the subject of thorough analysis, although they contain a vast amount of extremely valuable information concerning the lives of previous generations. In any case, the nature of the collections which were digitized determined the types of people that have become the libraries' key users. These undoubtedly include academics, who have obtained an effective means to access valuable and scientifically important sources of information. What was not expected, however, was the great interest that came from people who do not work professionally in the academic sphere. It was discovered that one of the largest groups of digital library users consisted of non-academics, who had always previously found it very hard to gain access to large academic libraries. Presumably, non-academic users often have less knowledge than academics, but make up for this with very strong personal motivation and determination. Moreover, they are dealing with collections which they are usually seeing for the first time, which generally gives rise to a very enthusiastic attitude towards digital libraries and provides a source of fascination with a new interest.

A survey was carried out to determine, among other things, the reasons why non-academics use digital libraries, how they rate such libraries, and what they expect from them. It is hoped that the results of this research will make it possible to adapt the content, organization and functioning of digital libraries to meet the needs and expectations of users from that group.

Literature review
The literature concerning the use of digital libraries concentrates chiefly on the evaluation of such libraries. A thematic bibliography prepared by Neuhaus (2005) lists 247 works; however, there are currently many more publications on the subject. Some of those most representative of the significant trends in research will be discussed here.

The great majority of publications concern evaluation methods themselves. Such papers include, for example, one describing the use of the quality function deployment method in the evaluation of digital libraries (Garibay et al., 2010). However, the evaluation methods used in their study are of a type usually applied by service companies, and it may, therefore, be questioned whether they are appropriate for evaluating the services provided by non-commercial institutions. Commercial companies generally focus on serving their most dominant or profit-generating users, while libraries are expected to serve every reader equally.

The study by Gonçalves et al. (2007) aimed to give a complete account of quality in digital libraries. The authors considered such indicators as accessibility, accuracy, completeness, composability, conformance, consistency, effectiveness, efficiency, extensibility, pertinence, preservability, relevance, reliability, reusability, significance, similarity and timeliness. A similar approach is taken by Pinto et al. (2008), who proposed a comprehensive evaluation model made up of such components as:

- diagnosis;
- strategic groups and performance information needs;

- perspectives on performance evaluation;
- evaluation criteria and methods; and
- evaluation points of view.

A development of this approach can be found in a study by Vinagre *et al.* (2011).

The most relevant publications are perhaps those which identify certain patterns, even though the universality of such rules may be limited, as they often depend to some degree on local conditions. One such study is that of Jeng (2005), which identified certain relationships between effectiveness, efficiency and satisfaction. In another paper, Sfakakis and Kapidakis (2002) demonstrated how user behaviour depends on features of the collection being used, on features of metadata and so forth. The research was carried out by comparing the behaviours of users with respect to ten different collections.

Xie (2006) described an experiment in which the users performing the evaluation developed a set of evaluation criteria themselves, based on certain guidelines. A continuation of the research was reported in a subsequent paper (Xie, 2008). Her research represented a change to the standard approach, in which it is the researchers who decide what criteria should be taken into account. Another approach was presented by Frias-Martinez *et al.* (2008). Their study examined how users' cognitive styles affect their behaviour and perception in digital libraries. The results showed that intermediate users and verbalizers not only have more positive perception, but they also complete tasks in more effective ways.

Kani-Zabihi *et al.* (2006) demonstrated how the opinions and suggestions returned by digital library users depend on their experience. Users were divided into three categories – novice, intermediate and advanced.

Several articles were published concerning surveys of user opinions which were intended to be used in the design and modernization of digital libraries, the main focus being on library usability. This was also the topic of, among others, one entire issue of the journal *OCLC Systems and Services* (Eden, 2005).

There are virtually no publications whose subject is the use of digital libraries. An exception is an article published by Tammaro (2008, p. 133), although the conclusions, based on a case study, were of an extremely general nature. For example, one of them reads:

> The users at the Library of the Institute and Museum of the History of Science are professionals and employees with a post bachelor degree and an age that ranges from 32 to 76.

There are no publications to date concerning the digital library user population as a whole. Research usually relates to students and academics, and entirely neglects users with no academic connections.

Research methodology

The research results presented here were preceded by an online survey carried out at the end of 2008 and start of 2009, with survey questionnaires being placed on Polish digital library sites Appendix. The survey attracted a relatively large amount of interest, which can be ascribed to the high level of enthusiasm of readers using digital libraries. A total of 1,025 completed questionnaires were returned. Readers answered questions concerning frequency and place of use, type of publications used, reasons for using the library and how they had originally become aware of it. There were also questions on

ways of using the library, including the submission of queries (single word, use of indexes used, multiple queries, etc.) and ways of using content (read on screen, printed, saved, etc.). A further question related to problems encountered when using the library. Readers were also asked what functionality (e.g. storage of results, searching of the set of publications returned by the previous query) they expect the library interface to provide.

A very important outcome of that survey was the identification of key groups of users of Polish digital libraries. Three main groups were identified: academics, students and non-academic users (chiefly people interested in local history and genealogy). It was decided to use these groups as a basis for further research, in which questionnaires were addressed to specific persons: those who had disclosed their e-mail address in the first survey and those engaged in correspondence with library administrators (637 persons in total), as well as those who had set up accounts with the Digital Library of Wielkopolska (9,274 persons).

The survey was carried out in 2011, with questionnaires sent by e-mail to the aforementioned 9,911 persons. The number of recipients who returned the questionnaires was 540 (slightly more than 5 per cent). This number included 322 in the non-academic group, 110 academics and 108 students. The purpose of this targeted survey was to obtain an evaluation of Polish digital libraries. However, it departed somewhat from typical judgements based on answers to questions of the type: "what difficulties do you encounter?", "how do you rate the search capabilities?" and so forth. As digital libraries have been operating in Poland for only a few years, it was decided that the best measure would be the degree of their acceptance by users. The primary aim was to discover whether digital libraries had an influence on users' consciousness. Evidently, this concerns the domain of changes relating to communication processes, particularly those which have been shaped through the possibility of access to academic libraries.

The research focused on what changes these are, how broad they are, and how long-lasting they are. In a short survey, it is not possible to address all aspects of the topic, therefore, it was decided to focus on the manner in which the digital library is treated as a tool for work, as this was considered to be the best indicator of the reader's reaction to the fact of the existence of digital library infrastructure. It was important to determine what functions digital libraries currently perform and what functions are expected in the future. Hence, questions were asked not only about the time spent working with a digital library, but also about the reliability of the sources it contains, how readers view the future of digital libraries and what they expect of them in the coming years.

Importantly, the questionnaire was designed with the expectation that a large proportion of the responses would be in the form of comments. The results in this regard did not disappoint – about 60 per cent of the respondents included explanations and comments, often quite lengthy. Some of them are quoted in the following sections.

Results
Characteristics of the non-academic user group
Non-academic users, on whom the present article focuses, constitute the largest group of regular users of digital libraries, accounting for almost 60 per cent of the total number, according to the results of the two surveys referred to above.

Non-academic users (322 persons) made up 59.6 per cent of all respondents in the targeted survey ($N = 540$). In the exploratory survey ($N = 964$), they accounted for 59.3 per cent (572 persons) (Górny and Mazurek, 2012).

Age

The age distribution of respondents in the non-academic category is given in Table I.

It can be seen that one-half of non-academic users are persons aged 50 and over. The largest specific age group (more than 30 per cent of the total) consists of persons aged between 50 and 60 years. These results do not come as a surprise. Persons in that age range generally have a stable professional and family situation, while they are usually still in good physical and psychological condition. Interest in family and local history grows with age, and many people have more time to spend on their personal interests when they are older.

Place of residence

Almost half of this group of digital library users live in towns with a population of less than 100,000, which generally do not have academic libraries (Table II). The largest specific category consists of those living in towns with between 2,001 and 25,000 inhabitants (approximately 630 different such towns). This includes 18 per cent of the respondents. The sizes of the groups of users defined based on size of town are very similar: exactly the same number live in cities with between 100,000 and 500,000 inhabitants. The data obtained do not indicate any correlation between the size of the town of residence and the number of persons using digital libraries.

Respondent's age	No. of replies (targeted survey) $N = 322$	(%)	No. of replies (exploratory survey) $N = 572$	(%)
16-20	6	1.8	14	2.4
21-30	26	8.0	102	17.8
31-40	56	17.3	133	23.2
41-50	63	19.5	101	17.6
51-60	99	30.7	163	28.4
61-70	57	17.6	51	8.8
71-80	11	3.3	8	1.3
80-90	4	1.2	0	0.0

Table I.
Age of non-academic users responding to both the targeted and the exploratory surveys

Size of town (population)	No. of replies (targeted survey) $N = 322$	(%)
Up to 2,000	43	13.3
2,001-25,000	58	18.0
25,001-100,000	52	16.1
100,001-500,000	58	18.0
500,001-1 million	54	16.7
Over 1 million	30	9.3

Note: Targeted survey, $N = 322$

Table II.
Size of towns in which responding non-academic users live

Interests
Of the non-academic users responding to the targeted survey, 10 per cent stated that their interests had been inspired by digital libraries and a further 43 per cent stated that this was the case to a certain extent (Table III).

Two selected comments representative of this topic were as follows: "My interest in old Polish writing was totally inspired by digital libraries. It was thanks to them that I discovered how rich our national heritage is"; "My interest began when I discovered that a 1930 census for the city of Poznań could be found in a digital library".

Non-academics use digital libraries principally for genealogical and heraldic studies, collecting biographical data, and researching the history of Poland and their home regions. According to some of the comments received, they use publications from digital libraries "for the great pleasure of getting to know these collections" and to develop their "own view of the world". The library is a "database of sources of academic texts". They use digital libraries to write their own publications of various types: "popular scientific articles" and "articles for the regional press or a blog, and genealogical and historical studies". The resources of digital libraries are also useful for narrowly specialized tasks, such as "cataloguing collections, identification of numismatic items", "to develop new Wikipedia articles and improve existing ones", "to prepare for history competitions", "to recreate the history of brewing" and to research the "history of forestry". In all, 192 persons (59.6 per cent of respondents) provided comments concerning the activities which caused them to make use of digital libraries.

Types of document accessed
Table IV indicates how often non-academic users make use of the particular types of document that they are able to access through digital libraries.

It can be noted that users are predominantly interested in archival sources. This is probably related to their seeking information about the history of their region and family. The second category of documents attracting great interest is newspapers.

Reply	No. of replies (targeted survey) $N = 322$	(%)
Yes	32	9.9
To some extent	140	43.4
No	150	46.5

Note: Targeted survey, $N = 322$

Table III.
Have your interests been inspired by the creation of digital libraries?

Type of document	Very often (%)	Sometimes (%)	Rarely (%)	Never (%)
Archival sources	200 (62.1)	88 (27.3)	22 (6.8)	12 (3.7)
Newspapers and magazines (nineteenth century-1939)	137 (42.5)	107 (33.2)	62 (19.2)	15 (4.6)
Genealogical materials	150 (46.5)	66 (20.4)	60 (18.6)	46 (14.2)
Address lists	81 (25.1)	91 (28.2)	74 (22.9)	76 (23.6)
Photographs and drawings	36 (11.1)	112 (34.7)	139 (43.1)	34 (10.5)

Note: $N = 322$

Table IV.
Frequency of use of various types of documents by non-academic users responding to the targeted survey

Because digital libraries collect local press publications, they can be considered a source concerning the history of a region. There is also a fairly high level of interest in genealogical sources, although digital libraries have only small numbers of these; hence, the greater use of archives. The rather moderate interest in address lists is somewhat surprising, but may result from the fact that these lists cover only limited professional groups (such as officers, engineers or doctors), and are, therefore, not a useful source of information for many people. The low level of interest reported in drawings and photographs is not surprising, as Polish digital libraries do not contain large numbers of such items.

Frequency and duration of digital library use
Tables V and VI indicate how frequently the non-academic users responding to the survey make use of digital libraries, and for how long they have been doing so.

More than 70 per cent of users make use of the library several times a week or several times a month, which would appear to represent the amount of time which a user might spend on his or her interest. Persons using the library daily are exceptional cases, and it must be remembered that such an intense level of use may continue only for a short time. Persons who only rarely make use of digital libraries can be assumed to be exceptionally seeking single pieces of information – for example, concerning a given person or event.

Digital libraries have existed in Poland for a relatively short period, about 10 years. Initially, their collections were extremely small and, hence, did not arouse much interest. Among present users, about 75 per cent have been using digital libraries for at least two years, while a quarter are new users who have been active for less than two years. This provides a certain measure of the rate of growth of this group of digital library users.

The total size of the non-academic user population – that is, the number of people in Poland using digital libraries for purposes not directly connected with their professional

Frequency of use of digital libraries	No. of replies (targeted survey) $N = 322$	(%)
Daily	24	7.4
Several times a week	102	31.6
Several times a month	133	41.3
Several times a year	48	14.9
More rarely	15	4.6

Note: $N = 322$

Table V.
Frequency of use of digital libraries by non-academic users responding to the targeted survey

For how long have you been using digital libraries? (year)	No. of replies (targeted survey) $N = 322$	(%)
Less than 2	76	23.6
2-7	161	50.0
Over 7	46	14.2
For many	1	0.3
Several	24	7.4

Note: $N = 322$

Table VI.
Duration of use of digital libraries by non-academic users responding to the targeted survey

work or education – is difficult to estimate at present. The only available data on which such an estimate might be based are the number of daily logins to the server of the Digital Library of Wielkopolska, together with the survey results concerning frequency of use.

The average daily number of logins in the first ten months of 2013 was 20,191. If it is assumed that 60 per cent of logins are generated by non-academics (the results of both surveys imply that 60 per cent of users are in that category), this gives a figure of approximately 12,000 logins per day from that group. From the responses given to the question on overall frequency of digital library use (Table V), it can be estimated that each unique user generates an average of 0.2 logins per day (7 per cent log in every day; 32 per cent log in "several times a week", assumed to mean typically every 3 days; 41 per cent log in "several times a month", assumed to mean typically every 10 days; 20 per cent log in "several times a year" or less, assumed to mean typically every 60 days; $0.07 \times 1 + 0.32 \times 1/3 + 0.41 \times 1/10 + 0.20 \times 1/60$ approximately 0.2). This means that the total number of non-academics using the Digital Library of Wielkopolska can be estimated at approximately 60,000 (12,000 daily logins/0.2 approximately 60,000). This is obviously an extremely rough calculation, and, among other things, does not take account of a likely sample bias.

Respondents' evaluation of digital libraries

The digital library as a valuable place to seek sources of information

A significant proportion of the information sources used by non-academic users come from digital libraries. These may account for as many as 40 per cent of all sources used (Table VII).

It should be noted, however, that it is not only the number of available sources that is important. It is equally significant that digital libraries constitute the only available means of obtaining certain documents.

Of the non-academic users who responded to the survey, 78 per cent stated they were able to access materials of which they had not been previously aware or to which they had not had access previously. Almost 16 per cent say that such situations have occurred sometimes. These high percentages are easy to understand – non-academic users often do not have any other ways to access large library collections except through digital libraries.

For non-academic users, digital copies are usually sufficient, which naturally further increases the usefulness of digital libraries (Table VIII). There is no need to have direct contact with the resources of traditional libraries and archives. For a non-academic user, who often has no easy access to rare collections, this fact is of enormous significance.

Per cent of sources used (%)	No. of replies (targeted survey) $N = 322$	(%)
< 10	50	15.5
10-30	84	26.0
30-50	74	22.9
50-80	98	30.4
80-90	0	0.0
90-100	10	3.1
Other replies	6	1.8

Table VII.
Replies by non-academic users (respondents to the targeted survey, $N = 322$) to the question: What percentage of all the sources you need for your work come from digital libraries?

Furthermore, 82 per cent of respondents believe that the digital version of a document is entirely sufficient for them, and they do not need to obtain the original in physical form. Only 18 per cent stated that they sometimes need to look at the original document.

Finally, digital libraries are trusted. There are many places on the Internet where various types of documents are made available. From the non-academic user's perspective, however, digital libraries are seen as an authorized source of literature. Readers take note of the fact that the libraries are state institutions, and consequently place a greater degree of trust in them.

Non-academic users' evaluations and expectations of digital libraries
Respondents were asked to evaluate certain features of the functioning and resources of digital libraries, using a five-point scale. They were also asked to assess the importance of certain tasks that might be undertaken to improve the quality of service provided by such libraries. The responses given by non-academic users are presented in the following tables, alongside those given by academics and students in the same survey.

The evaluations of digital libraries made by non-academic users do not differ fundamentally from those made by students and academics. It can nonetheless be noticed that the quantity of resources is rated more highly by non-academic users than by the other groups (57.1 per cent stated that it was at least good, compared with 47.1 per cent of students and 50.8 per cent of academics) (Table IX). The library's reliability was also very highly rated – 84 per cent of non-academics stated that it was at least good, compared with 75.4 per cent of academics and 77.6 per cent of students. Similarly, information searching was evaluated most highly by non-academic users (61.7 per cent rated it at least good, compared with 57.3 per cent of students and 58.1 per cent of academics), although here the differences were not great.

As concerns expectations, those reported by non-academic users were almost always lower than those of students and academics. The only exception concerned full text search, where 34 per cent of non-academic respondents considered improvement to be at least important (compared with 30.5 per cent of students and 22.6 per cent of academics) (Table X). The survey results may indicate that the availability of even a relatively small number of digital publications is received very positively by non-academic users, as they have never before had such easy and unrestricted access to the publications that interest them. Full text searching, however, may cause certain problems to inexperienced users.

Table VIII.
Responses by non-academic users responding to the targeted survey ($N = 322$) to a question concerning the acceptability of sources found in digital libraries

Question	Yes (%)	It depends (%)	No (%)
Do you value the sources and materials found in digital libraries more highly than those available on other websites?	246 (76.3)	50 (15.5)	26 (8.0)

Question	Feature	Assessment	Academics N = 110 (%)	Students N = 108 (%)	Non-academic users N = 322 (%)
Assessment of selected features of digital libraries	Reliability	Excellent	2 (1.8)	7 (6.4)	16 (4.9)
		Very good	25 (22.7)	30 (27.7)	101 (31.3)
		Good	56 (50.9)	47 (43.5)	154 (47.8)
		Satisfactory	23 (20.9)	20 (18.5)	49 (15.2)
		Unsatisfactory	4 (3.6)	4 (3.7)	2 (0.6)
	Ease of use	Excellent	7 (6.3)	9 (8.3)	37 (11.4)
		Very good	38 (34.5)	38 (35.1)	106 (32.9)
		Good	53 (48.1)	41 (37.9)	130 (40.3)
		Satisfactory	11 (10.0)	17 (15.7)	40 (12.4)
		Unsatisfactory	1 (0.9)	3 (2.7)	9 (2.7)
	Quantity of resources	Excellent	2 (1.8)	0 (0.0)	10 (3.1)
		Very good	12 (10.9)	10 (9.2)	39 (12.1)
		Good	42 (38.1)	41 (37.9)	135 (41.9)
		Satisfactory	41 (37.2)	35 (32.4)	91 (28.2)
		Unsatisfactory	13 (11.8)	22 (20.3)	47 (14.5)
	Retrieval	Excellent	0 (0.0)	3 (2.7)	5 (1.5)
		Very good	8 (7.2)	20 (18.5)	51 (15.8)
		Good	56 (50.9)	39 (36.1)	143 (44.4)
		Satisfactory	40 (36.3)	37 (34.2)	99 (30.7)
		Unsatisfactory	6 (5.4)	9 (8.3)	18 (5.5)
	Scan quality	Excellent	6 (5.4)	11 (10.1)	15 (4.6)
		Very good	29 (26.3)	41 (37.9)	126 (39.1)
		Good	56 (50.9)	44 (40.7)	137 (42.5)
		Satisfactory	19 (17.2)	11 (10.1)	40 (12.4)
		Unsatisfactory	0 (0.0)	1 (0.9)	4 (1.2)

Table IX.
Evaluations of
particular features of
digital libraries by
respondents in all
three groups

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Question	Task	Degree of importance	Academics $N = 110$ (%)	Students $N = 108$ (%)	Non-academic users $N = 322$ (%)
What task do you think digital libraries should currently consider the most important? Please indicate the three most important tasks	Increase the number of publications available	Priority	85 (77.2)	83 (76.8)	214 (66.4)
		Important	18 (16.3)	18 (16.6)	64 (19.8)
		Worth doing	2 (1.8)	2 (1.8)	16 (4.9)
		No reply	5 (4.5)	5 (4.6)	28 (8.6)
	Improve retrieval	Priority	28 (25.4)	20 (18.5)	61 (18.9)
		Important	30 (27.2)	30 (27.7)	110 (34.1)
		Worth doing	18 (16.3)	17 (15.7)	60 (18.6)
		No reply	34 (30.9)	41 (37.9)	91 (28.2)
	Improve subject searching	Priority	12 (10.9)	14 (12.9)	44 (13.6)
		Important	14 (12.7)	22 (20.3)	57 (17.7)
		Worth doing	7 (6.3)	12 (11.1)	19 (5.9)
		No reply	77 (70)	60 (55.5)	202 (62.7)
	Improve full text search	Priority	20 (18.1)	17 (15.7)	55 (17.0)
		Important	5 (4.5)	16 (14.8)	55 (17.0)
		Worth doing	21 (19.0)	18 (16.6)	12 (3.7)
		No reply	64 (58.1)	57 (52.7)	200 (62.1)
	Improve scan quality	Priority	16 (14.5)	6 (5.5)	22 (6.8)
		Important	25 (22.7)	17 (15.7)	83 (25.7)
		Worth doing	19 (17.2)	34 (31.4)	94 (29.1)
		No reply	50 (45.4)	51 (47.2)	123 (38.1)

Table X.
Expectations of digital libraries as indicated by respondents in all three groups

Three main conclusions can be drawn from the survey:

- Non-academic users consider the most important task at present to be increasing the quantity of material in digital libraries (this is considered important by 86.2 per cent of respondents).

- Non-academics do not have any difficulties making use of digital libraries.

- The items of greatest interest to such users are archives, newspapers and genealogical documents.

To some degree, these results may be taken into account in planning the further development of Polish digital libraries. First, the current quantitative expansion of collections does not come up to users' expectations, and the rate of digitization needs to be significantly increased. Second, it is particularly vital to increase the rate of digitization of newspapers – in view both of users' expectations and of the ongoing degradation of these resources (the acid paper effect).

Conclusions

Polish digital libraries have proved to be a very powerful stimulator of cultural activity. Naturally, this stimulation relates only to certain specific areas of culture, concerning chiefly the history of local communities. This limitation results clearly from the nature of the resources offered by digital libraries.

In our targeted survey, approximately 10 per cent of respondents stated that access to a digital library had caused them to investigate the history of their family or their local neighbourhood, regarding this as their hobby. More than 40 per cent believe that the appearance of digital libraries and, therefore, easy access to multiple sources of information, has helped to shape their interests. If these results are representative of the wider population of users, it means that digital libraries have become one of the most important elements of cultural infrastructure in Poland. This is particularly so, as they do not merely inspire the aforementioned interests, but actually make them possible in the first place. At a very conservative estimate, approximately 40 per cent of all sources used by the non-academic users in question come from digital libraries (one in every three of the respondents states that from 50 to 80 per cent of sources used come from such libraries). Almost 80 per cent of respondents stated that there often occur situations where they would never have gained access to certain publications were it not for digital libraries, and another 16 per cent stated that such situations occur sometimes. More than 80 per cent of respondents were satisfied with digital copies, not perceiving a need to examine the original document. This shows that most non-academic users are, to a very large degree, dependent on digital libraries. Presumably, they would not be pursuing their interests to the same extent if digital libraries did not exist.

It is true that the Internet today provides vast possibilities for the exchange of information and access to numerous portals through which a very wide range of publications are made available. Nonetheless, digital libraries have relatively large collections of documents, provide suitable tools for searching them, and – perhaps most importantly – inspire trust. More than 76 per cent of respondents in the non-academic category trust a digital library more than other websites.

It is estimated above that the total number of persons who make systematic use of the Digital Library of Wielkopolska for non-academic purposes is 60,000. Considering that these persons have friends and family, we can conclude that the range of the cultural

impact of Polish digital libraries to some degree includes as many as 100,000 or 200,000 people (at a conservative estimate, if every regular digital library user passes on his or her "discoveries" to three friends or family members, then there are at least 180,000 persons subject to the regular influence of digital library content).

Digital libraries can be said to have become a kind of "repository of social memory". They enable people to find out about their past. This is of concern not so much because of the past of the nation as a whole, as the history of families, and of the place where someone lives. Of course, a certain number of those people also use digital libraries in pursuing interests that are not necessarily connected with local history. These include, for example, a relatively large number of amateur historians with an interest in military history. The dominant interests, however, are genealogy and regional history. People with these interests establish personal contacts and exchange information thanks to digital libraries. For example, the Digital Library of Wielkopolska contains two magazines published by regional historians (more than 200 issues in all) containing recollections from the time of the war and the interwar period. This constitutes valuable material for professional historians. It also turns out that they contain information concerning the fates of many people who went missing during the war. Every so often, thanks to this information, families are able to find out 70 years on where their relatives are buried and in what circumstances they died. There was also a case in which relatives were reunited after 70 years.

Non-academic users also form a kind of "grid" that is of assistance to librarians. Because they are quite a large group and look through almost all digital materials, they notice many errors. This is of concern in particular because of missing pages or pages scanned upside-down. Sometimes, they also point out errors in document descriptions. They are also capable of finding (particularly in newspapers) various items of interest that sometimes even surprise professional historians. For example, such users have discovered mentions of the first demonstrations of television in Poland, which took place in 1929, even though the date officially given is 1939.

Relevant research into the functions performed by digital libraries has only just begun. However, the social consequences of the existence of digital libraries already lie within the field of interest of many other disciplines.

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Appendix. The questionnaire sent to users of Polish digital libraries identified as non-academics

PART I: Use of digital libraries

(1) Please say how often you use digital libraries:
- daily;
- several times a week;
- several times a month;
- several times a year; and
- more rarely.

(2) Please say how much time you spend working with a digital library each week.

(3) What types of information do you make use of? Please state to what degree you use these materials, using the following scale: *very often, sometimes, quite rarely, never*:
- photographs and drawings;
- maps;
- short factual information;
- articles;
- monographs;
- archival sources;
- source documents;
- armorials;
- genealogical materials;

- newspapers and magazines;
- address lists;
- lists of persons; and
- others (which? and how often?) […].

(4) Please state for what purposes the resources and functions of digital libraries are useful for you.

(5) Have your interests been inspired by the creation of digital libraries?
- yes;
- to some extent; and
- no.

Remarks: […].

(6) Do you try to use the capabilities of the digital library for rapidly finding the parts of the text that interest you?
- yes, very often;
- sometimes (digital libraries do not always offer such a possibility); and
- I have not yet tried.

Remarks: […].

(7) Has a digital library enabled you to reach sources which you would not otherwise have found or which would not have been accessible to you other than through a digital library?
- often;
- sometimes; and
- never.

Remarks: […]

(8) Can the research sources available in digital libraries replace the originals for you?
- certainly (in principle I don't need to view the originals);
- no, in some situations I need to use the original (why?) […]; and
- no, I always have to use the original (why?) […].

(9) Do you value the sources and materials found in digital libraries more highly than those available on other websites?
- yes (why?) […];
- no (why?) […]; and
- it depends (on what?) […].

Remarks: […].

(10) Can you estimate what percentage of all the sources you need for your work come from digital libraries?

PART II: Evaluation of digital libraries

(11) Please evaluate the functioning and resources of the digital library, using the following scale: *unsatisfactory*, *satisfactory*, *good*, *very good*, *excellent*:
- How do you rate the quantity of resources provided by digital libraries?
- How do you rate the quality of scans?
- How do you rate the ability to search for specific items?
- How do you rate the ability to search the resources of digital libraries?

- How do you rate the ability to read and use publications?
- How do you rate the general ease of use of digital libraries?
- How do you rate the reliability of the system of digital libraries?

PART III: Expectations of users

(12) In your opinion, should emphasis be placed on the rapid development of digital libraries at the cost of traditional libraries (primarily academic libraries)?
   - yes; and
   - no

Remarks: […].

(13) In your opinion, what type of publications ought to be added most quickly to digital libraries?

(14) What task do you think digital libraries should currently consider the most important? Please indicate the three most important tasks, using the following scale: *priority*, *important*, *worth doing*:
   - significantly increase the number of publications available online;
   - improve the quality of scans;
   - improve the ease of searching for specific items;
   - improve the ability to search for items on a given topic; and
   - improve the ability to search the text of publications.

Remarks: […].

PART IV: The future of digital libraries

(15) Please give your opinion on the statement: "In about 10 years, academics and students will be using only digital publications available online":
   - yes, this will happen in the next few years;
   - no, although digital publications will be dominant;
   - no, printed publications will still be dominant; and

Remarks: […]

PART V: User characteristics

(16) Please state the area of your interests which relates to the use of digital libraries.

(17) For how long have you been using digital libraries?

(18) Which digital libraries do you use most often?

(19) Please state the size of the city, town or village in which you live.

(20) Please state your age.

Corresponding author
Miroslaw Górny can be contacted at: konger2@poczta.onet.pl

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