

Newspapers as a Research Source: Information Needs and Information Seeking of Humanities Scholars

Sanjica Faletar Tanacković

Department of Information Sciences, Faculty of Humanities and Social Sciences, University of Osijek, Croatia.
sfaletar@ffos.hr

Maja Krtalić

Department of Information Sciences, Faculty of Humanities and Social Sciences, University of Osijek, Croatia.
mkrtalic@ffos.hr

Darko Lacović

Department of Information Sciences, Faculty of Humanities and Social Sciences, University of Osijek, Croatia.
dlacovic@ffos.hr



Copyright © 2014 by Sanjica Faletar Tanacković, Maja Krtalić and Darko Lacović. This work is made available under the terms of the Creative Commons Attribution 3.0 Unported License:

<http://creativecommons.org/licenses/by/3.0/>

Abstract:

This paper focuses on newspapers as a scientific research source in the humanities. The purpose of this paper is to present a portion of the results obtained in the nationwide study which explored how Croatian humanities academics and scholars perceive and use (historical and current) newspapers. The study presented in this paper focused on two groups of researchers, historians and linguists, and aimed to answer the following research questions: 'What kinds of information do (Croatian) historians and linguists look for in newspapers?', 'What difficulties do researchers encounter when using newspapers?' and 'What would enhance newspaper use in their further research?'

A survey was conducted in December 2013 through an online questionnaire, and the initial results show that almost half of the respondents use newspapers (print or online) as a primary research source and that the majority of respondents still prefer to consult print newspapers over electronic for a variety of reasons. Interestingly, although the majority of respondents find and consult the newspapers in local (Croatian) libraries, archives and museums, a significant portion of the respondents (20,4%) visit foreign cultural heritage institutions to access the newspaper material they need.

The paper critically analyses the information needs and behaviour of a specific newspaper user group which has not yet been studied in Croatia and provides data which can contribute to the development of national newspaper preservation policy.

Keywords: newspapers, information behaviour, digital newspaper collections, scientific research, Croatia

Introduction

Searching for significant and relevant information that is useful in scientific research can be a challenging task. Newspapers (historical and contemporary) are full of different kinds of information that can be used in many ways – for amusement or education, for example, but also for scientific research. Often newspapers are perceived as having content that is less worthy than scientific journals and textbooks for any serious education or research purpose because of their sensationalistic character. Up to a certain degree this is true; however, they do reflect social and cultural values of a certain place and time and often contain unique information that cannot be found anywhere else. Moreover, they carry a reflection of the language structure of a certain time. Newspapers are also a material artefact worth researching, both in print form (typography, paper properties) and online (graphic design). Online newspapers offer a lot of material for sociological research (reader comments, etc.). These are just some explicit values of newspapers which make them worthy of research in the social sciences and humanities. Scholars such as historians, linguists, psychologists, scholars from media studies, education science, information sciences, publishing, graphic design and other scientific fields could benefit from having access to well organised and preserved newspaper collections.

The professional literature devoted to the topic of newspapers as an information source reflects the diverse aspects from which newspapers are studied. A large body of literature is devoted to the digitisation process and creating digital newspaper collections (King 2005, Lanz et al. 2009). This issue is presented most often from technical or organisational points of view, and the focus is often on the preservation and accessibility of newspaper collections (Fleming and King 2009, Allen and Johnson 2008). Although the use of different information sources has been popular among the human information behaviour researchers (Ingwersen and Jarvelin 2005, Case 2012), relatively small body of literature examines information behaviour in the context of newspapers.

Whitlam and Preston (1998) discussed newspapers as an information resource in sports journalism. Several authors have focused on analysing the information behaviour and needs of historians and linguists which are relevant for this paper. Anderson (2004) analysed historians' search methods for primary sources. He revealed that the predominant factor explaining historians' information-retrieval behaviour is the type, or genre, of source concerned. Among other things he investigated newspapers as a retrieval method. Tibbo (2002) explored how historians located primary resource materials in the digital age, including newspapers among other resources.

Hassan, Wade and Wilkinson (2012) analyzed the information needs of historians working with original and/or digitised primary resources, particularly local newspaper collections. They focused on preferences between original or digitised resources and the reasons behind

these preferences. Through interviews, Allen and Sieczkiewicz (2010) focused on historians' needs for searching collections of newspapers and managing the information they find.

Flavian and Gurrea (2007) explored the relationships between digital and traditional newspapers and the readers attitudes to both formats as did Massis (2012), who examined the transition of print newspapers to the digital environment and the role and place of libraries within this process. Maidel et al. (2010) researched the relationship between user behaviour and relevance of information. They described the ontological content-based filtering method for ranking the relevance of items for readers of news within a personalised electronic newspaper prototype system. Sivankutty and Sudhakaran (2011) explored the attitudes of library professionals in India towards newspapers as an information source and the ways in which newspapers are used. Kanellopoulos and Kotsiantis (2012) evaluated Greek newspaper websites and gave a proposal for matching Greek online newspapers with the profiles of potential readers.

This paper focuses on the ways in which Croatian historians and linguists use newspapers in their scientific research and their perception of the value of newspaper content. It follows up on the preliminary results from a case study conducted in 2012 at the Faculty of Humanities and Social Sciences at the University of Osijek, Croatia (Krtalić and Hasenay 2012).

Methodology

Results presented in this paper are part of a larger nationwide study that aims to investigate the information behaviour and user needs of Croatian academics and scholars from the social sciences and the humanities. The first phase focused on two groups of researchers, historians and linguists, and aimed to answer the following research questions:

- 'What kinds of information do (Croatian) historians and linguists look for in newspapers?',
- 'What difficulties do researchers encounter when using newspapers?' and
- 'What would enhance newspaper use in their further research?'

The research started from a hypothesis that newspapers are a relevant information source for historians and linguists, but their potential is not fully used because of limitations in the access to newspaper collections and obstacles in searching for and retrieving information from newspaper content.

A survey was conducted in December 2013 through an online questionnaire. The anonymous questionnaires were distributed to 803 academics employed in the linguistic and history departments of six universities in Croatia and to 31 scholars from three major history and language research institutes. One-hundred and ninety-one valid questionnaires were returned (23%). The questionnaire consisted of 29 questions divided into three groups: background information about the respondents, their use of primary source materials, their use of newspapers and their experience with newspaper collections in libraries and archives. The questionnaire mainly consisted of closed multiple-choice questions with the possibility of providing additional answers if none of the given options were satisfactory to the respondents. Three questions were open-end questions.

Results

Respondent characteristics

The questionnaire was completed by 191 respondents of which more females (n=135, 70.7%) than males responded (n=56, 29.3%). Regarding age, the most represented were respondents aged 30–39 (n=78, 40.8%) and 40–49 (n=64, 33.5%). Other age groups were distributed as follows: 50–59 (n=22, 11.5%), 20–29 (n=13, 6.8%) and 60–69 (n=12, 6.3%). The least represented respondents were in the age group of over 70 (n=2, 1%) and data related to this age group should be interpreted carefully.

More than half of the respondents have been engaged in scientific research for between 10 and 20 years (n=63, 33.0%) as well as for between 5 and 10 years (n=59, 30.9%). Others have been engaged in scientific work for more than 20 years (n=37, 19.4%) and for between 3 and 5 years (n=20, 10.5%). The smallest number of respondents has been doing scientific work for less than 3 years (n=12, 6.3%).

Regarding vocation, most of the respondents who participated in the study were assistant professors (n=48, 25.1%) followed by teaching and research assistants (n=39, 20.4%) and senior assistants (n=33, 17.3%). Almost an equal number of respondents were full professors (n=20, 10.5%) and associate professors (n=19, 9.9%). A smaller number of respondents were senior lecturers (n=8, 4.2%), scientific assistants (n=6, 3.1%), senior scientific assistants (n=6, 3.1%), scientific advisors (n=6, 3.1%), lecturers (n=5, 2.6%) and research assistants (n=1, 0.5%).

As for the areas of the respondents' scientific interest, 74.3% of the respondents stated that their area of their expertise is philology (the majority of which are linguists: 66.9%). Only 19.4% of respondents are historians, and 6.3% did not clearly state their specific field of interest.

Everyday usage of ICT technology

Regarding the question about everyday usage of information and communication technology, the vast majority of the respondents, as expected, indicated that they used e-mail (n=177, 92.7%), laptops (n=175, 91.6%) and personal computers (n=152, 79.6%). Almost half of the respondents used smart phones (n=81, 42.4%), while e-readers (n=24, 12.6%) and tablets (n=32, 16.8%) were used to a lesser degree. A Chi-Square test showed that there was statistical significance among respondents in different age groups for the variable of laptop use (P=0.026). Among male and female respondents, a statistical difference was identified only in relation to the variable of e-mail use (P=0.018), which was used more by female (95.6%) than male respondents (85.7%). According to the length of time engaged in scientific research work, a statistical difference was identified for the variable of smart phone use (P=0.003), which were used more by the respondents who have been working in the field between 3 and 5 years (65.0%) than those who have worked more than 20 years (16.2%). The statistical differences regarding information and communication technology use were not determined among respondents with different scientific vocations.

Primary and secondary information sources

When asked "How often do you use primary sources of information in your scientific research?" about half of the respondents said that they always use books (published literary

works) in their scientific research (n=99, 51.8%). About a third of the respondents reported that they frequently used journals (n=67, 35.1%) and newspapers (n=60, 31.4%), while slightly less than half of the respondents sometimes consulted manuscripts (n=83, 43.4%), diaries (n=82, 42.9%), letters (n=80, 41.9%) and photographs (n=79, 41.4%). Government documents (n=72, 37.7%), ephemeral material (leaflets, posters, pamphlets, etc.) (n=72, 37.7%), film and sound recordings (n=69, 36.1%), oral historical sources (n=64, 33.5%), maps and plans (n=62, 32.4%), register books (n=54, 28.3%), records and reports (n=53, 27.7%) and calendars (n=51, 26.7%) were sometimes used by around a third of the respondents. The majority of the respondents never used musical recordings (n=168, 88.0%), genealogical sources (n=151, 79.1%) or graphics (n=135, 70.7%) followed by artefacts and museum pieces (n=131, 68.6%). Under the option “other” respondents indicated that they sometimes consulted e-records on the Internet (databases, social networks, blogs, chats, e-mail, SMS) (n=13, 6.8%), linguistic corpus (n=3, 1.5%), archival materials and print (published) historical sources (n=2, 1.0%), sound recording transcripts (n=2, 1.0%), corporeal archaeological remains (n=2, 1.0%), travel books (n=2, 1.0%), statistical sources (n=1, 0.5%), drawings (n=1, 0.5%), native speakers (n=1, 0.5%), notary public records (n=1, 0.5%), consultations (n=1, 0.5%), memoirs (n=1, 0.5%), tombstone speeches (n=1, 0.5%), promotional (advertising) materials (n=1, 0.5%), art work reproduction (n=1, 0.5%), TV and radio programs (n=1, 0.5%) and interview, test and observation instruments (n=1, 0.5%). The results are presented in Table 1. An ANOVA-test showed statistical significance between different age groups among respondents who used diaries (P=0.043). Respondents in the 30–39 age group (mean 3.50) sometimes consulted diaries more than respondents from the 40–49 age group (mean 3.11). A T-test revealed a statistical difference among male and female respondents for the use of the following variables: manuscripts (P=0.029); records and reports (P=0.036); ephemeral material (P=0.048); maps, plans and drafts (P=0.000); graphics (P=0.001); photographs (P=0.010); oral historical sources (P=0.023) and other sources (P=0.004) wherein interestingly all these sources were used by more female than male respondents. The ANOVA-test showed a statistical difference in relation to the respondents’ scientific vocation for the following answers: manuscripts (P=0.000, lecturers = mean 4.00, scientific advisors = mean 1.67), letters (P=0.000, research assistants = mean 3.62, scientific advisors = mean 2.00), diaries (P=0.000, senior lecturers = mean 3.88, scientific assistants = mean 2.17), coats of arms and genealogical sources (P=0.009, senior lecturers and lecturers = mean 4.00, scientific advisors = mean 3.00), records and reports (P=0.047, lecturers = mean 3.80, scientific advisors = mean 2.17), register books (P=0.043, lecturers = mean 4.00, scientific advisors and research assistants = mean 2.83), calendars (P=0.006, senior lecturers = mean 3.88, senior scientific assistants = mean 2.67) and graphics (P=0.000, lecturers and research assistants = mean 4.00, scientific advisors = mean 2.50).

Table 1. Usage of primary information sources

Primary information sources	always	frequently	sometimes	never
manuscripts	12.6%	17.3%	43.4%	28.8%
letters	3.1%	8.4%	41.9%	46.6%
diaries	1.6%	9.4%	42.9%	46.1%
genealogical sources	1.0%	1.6%	18.3%	79.1%
records and reports (administrative, church, cities, etc.)	7.9%	13.1%	27.7%	51.3%
register books	1.0%	8.9%	28.3%	61.8%
ephemeral material (leaflets, posters, pamphlets, etc.)	2.1%	11.5%	37.7%	48.7%

newspapers	15.2%	31.4%	30.4%	23.0%
journals	41.9%	35.1%	13.6%	9.4%
calendars	2.1%	5.2%	26.7%	66.0%
books (published literary works)	51.8%	23.0%	16.2%	8.9%
official government documents (laws, etc.)	9.9%	17.3%	37.7%	35.1%
maps, plans, drafts	8.4%	11.0%	32.4%	48.7%
musical recordings	0.5%	1.0%	10.5%	88.0%
artefacts and museum objects	2.6%	6.8%	22.0%	68.6%
graphics	0.5%	3.7%	25.1%	70.7%
photographs	3.1%	17.3%	41.4%	38.2%
film recordings	2.1%	12.0%	36.1%	49.7%
sound recordings	5.8%	12.6%	36.1%	45.5%
oral historical sources	2.6%	8.9%	33.5%	55.0%
other	8.4%	12.6%	6.8%	72.3%

Answers to the question “How often do you use secondary sources of information in your scientific research?” showed that the majority of the respondents always used scientific books/monographs (n=178, 93.1%), scientific journals (n=172, 90.0%), conference proceedings (n=154, 80.6%) and reference publications (encyclopaedias, lexicons, dictionaries) (n=145, 75.9%). The ANOVA test showed that there were no statistical differences in relation to the age, length of scientific work and vocation of the respondents, while the T-test did not reveal statistically significant differences related to the gender of the respondents.

Taking into account the language of the primary information sources, most respondents revealed that for their scientific work they used primary sources in the Croatian language (n=148, 77.5%), while less than half of the respondents consulted primary sources of information in the English language (n=89, 46.6%). Almost a third of the respondents used primary information sources in the Italian language (n=53, 27.7%) and in the German language (n=50, 26.2%). The smallest number of respondents consulted primary sources of information in the French language (n=24, 12.6%). Some of the other languages that respondents used were Serbian, Greek, Latin, Spanish, Russian, Dutch, Polish, Slovenian, Montenegrin, Portuguese, Hungarian, Hebrew, Arabian, Czech, Macedonian, Bulgarian, Romanian and Turkish (total n=82, 42.9%). The Chi-Square test showed statistical significance only in relation to the gender of the respondents for the use of information sources in the German language (P=0.022) which were used by more male (37.5%) than female (21.5%) respondents.

On the other hand, secondary sources of information for scientific research were used by more respondents in the English language (n=179, 93.7%) than in the Croatian language (n=152, 79.6%). Languages of secondary information sources that respondents used to a lesser degree were German (n=76, 39.8%), Italian (n=72, 37.7%) and French (n=50, 26.2%). Some of the other languages of secondary information sources that respondents used were Swedish, Turkish, Russian, Spanish, Polish, Czech, Hungarian, Romanian, Portuguese, Greek, Latin, Slovakian, Serbian, Arabian, Bulgarian, Slovenian, Macedonian, Dutch and Danish (total n=75, 39.3%). The Chi-Square test identified statistical significance in relation to the respondents' age for the following variables: Croatian language (P=0.023, age group 50-59 = 86.4%, age group 60-69 = 41.7%), English language (P=0.047, age group 50-59 = 100.0%, age group over 70 = 50.0%) and German language (P=0.040, age groups 40-49 and 60-69 =

50.0%, age group 20-29 = 7.7%). Statistical significance was also revealed according to the gender of the respondents for the variables information sources in the German language ($P=0.002$) and other sources ($P=0.003$), which were both consulted more by male than female respondents. Moreover, statistical significance was identified for information sources in the German language in relation to the length of scientific work ($P=0.009$, between 10 and 20 years = 55.6%, between 5 and 10 years = 27.1%) and according to the type of scientific vocation ($P=0.020$, scientific advisors = 83.3%, teaching and research assistants = 23.1%).

When asked “If you have a choice, in which form do you prefer to use primary and secondary sources of information?” more respondents indicated that they preferred to use primary documents in digital form ($n=114$, 59.6%) rather than print sources ($n=76$, 39.7%). Only a few respondents preferred to use primary documents in the form of microfilm ($n=5$, 2.6%). Almost an equal number of respondents consulted both digital ($n=113$, 59.1%) and print forms ($n=99$, 51.8%) of secondary documents, while just a few respondents used secondary information sources in the form of microfilm ($n=2$, 1.0%).

Newspaper use – importance, frequency and format

For the next question, respondents had to assess the importance of newspapers as an information source for their scientific work on a scale of 1 to 5 (1 = not important, 5 = very important), and the results revealed that 62.3% of respondents considered newspapers as not very important (1=22.5%, 2=16.2%, 3=23.6%) with an average mean of 2.94. Surprisingly, a high level of importance (4=20.4%, 5=17.3%) was given to newspapers as an information source by only 37.7% of the respondents. The ANOVA test did not identify statistical significance according to the age, length of scientific work and vocation of the respondents, and the T-test did not show statistical significance in relation to the gender of the respondents.

Answering the question “How often do you use newspapers in your scientific work/papers?” slightly more than a third of the respondents said that they only sometimes used newspapers as a source of information in their research ($n=69$, 36.1%). An equal and smaller number of respondents often ($n=50$, 26.2%) or never ($n=49$, 25.7%) used newspapers. The smallest number of respondents indicated that they always consulted newspapers in their papers ($n=23$, 12.0%). The ANOVA test did not show statistical significance in relation to the age, length of scientific work and vocation of the respondents, and the T-test did not identify statistical significance according to the gender of the respondents. However, if we add up all the respondents who used newspapers in their research, regardless of how often, the total number is significantly high: 74.3%.

Those respondents who have never used newspapers in their scientific research mostly indicated that the reason for this was the topic or area of their scientific research, which was not represented in the newspapers ($n=34$, 17.8%). Some of them found newspapers to be irrelevant or not necessary for their work and some of them thought that newspapers did not belong in serious scientific literature.

To the question “Do you need to use original print newspapers if you have digital versions of the newspapers available?” almost a third of the respondents ($n=47$, 24.6%) answered that they had a need to consult original print newspapers even though they had digital versions of newspapers available. Some of the reasons were: incorrect and incomplete digital versions of newspapers (for instance commercials are not often included in digital versions, lack of contributions in digital versions), better overviews of text in the print newspapers, a

preference for using the original, a habit of consulting print versions, digital versions are sometimes difficult to read, print newspapers can be read without a computer, print newspapers can be read outside the home or workplace, a sense of authenticity (smell), print newspapers can be saved for later use, to check data from digital version, different graphical layout between print and digital newspapers etc. Almost 20% of the respondents did not have a need to consult original print newspapers when they had digital versions of newspapers available (n=34, 17.8%). Some of their reasons were the following: easier and faster searching of digital newspapers, digital versions were credible and gave the same information as print newspapers, digital versions are more accessible (at any time and regardless of the reader's physical location). The smallest number of respondents sometimes used original print newspapers although they had available digital versions of newspapers available (n=20, 10.4%) because most of them were unsatisfied with the poor quality of digitization.

For the next question, respondents had to assess their agreement with 10 statements related to newspapers on the scale of 1 to 5 (1 = strongly disagree, 5 = strongly agree). As can be seen from Table 2, most respondents mainly agreed with the statement that information in newspapers is necessary to check in other sources (mean 4.15), followed by “newspapers are an easily accessible source of information” (mean 3.76), “newspaper material is not indexed enough in information institutions” (mean 3.69), “newspaper material is not adequately preserved in information institutions” (mean 3.32), “information in newspapers is easy to search/retrieve” (mean 3.29), “newspaper sources raise the quality of the research work in my scientific area” (mean 3.20) and “newspapers are a necessary information source for work in my scientific area” (mean 3.13). To a lesser degree, respondents agreed with the following statements: “newspaper material is not used enough in my scientific area” (mean 2.76), “information in the newspapers is reliable and correct” (mean 2.75) and “the information in the newspapers cannot be found elsewhere” (mean 2.43). The ANOVA test showed that there were no statistical differences in relation to the respondents’ age and length of their scientific work, but statistical significance was identified according to scientific vocation for the following statements: “newspaper sources raise the quality of research work in my scientific area” (P=0.004, scientific advisors = mean 4.40, associate professors = mean 2.44) and “newspaper material is not indexed enough in information institutions (P=0.002, teaching and research assistants and scientific assistants = mean 4.20, lecturers = mean 2.50). The T-test did not reveal statistical significance in relation to the gender of the respondents.

Table 2. Agreement to the statements on newspapers

Statements on newspapers	Mean
Information in newspapers is necessary to check in other sources	4.15
Newspapers are an easily accessible source of information	3.76
Newspaper material is not indexed enough in information institutions	3.69
Newspaper material is not adequately preserved in information institutions	3.32
Information in newspapers is easy to search/retrieve	3.29
Newspaper sources raise the quality of the research work in my scientific area	3.20
Newspapers are a necessary information source for work in my scientific area	3.13
Newspaper material is not used enough in my scientific area	2.76
Information in the newspapers is reliable and correct	2.75
Information in the newspapers cannot be found elsewhere	2.43

Type of information in newspapers

Answers to the question “What kind of information do you study in the newspapers?” revealed that around half of the respondents used historical data to check and complete original data from other sources (n=73, 51.4%). Moreover, they studied the linguistic characteristics of the text (n=72, 50.7%), and they needed data on society and social movements (n=70, 49.3%). Less than half of the respondents studied original historical data which were not recorded elsewhere (n=58, 40.8%), followed by literary texts (n=53, 37.3%), personal attitudes/opinions (for instance, in the section letters from the readers), advertisements (n=38, 26.8%) and illustrations (n=28, 19.7%). The respondents least studied information related to the graphical characteristics of newspapers as a physical object and editorials (n=11, 7.7%). Some of the other least consulted types of information were literary reviews, reports, essays, obituaries, horoscopes, etc. (n=16, 8.3%). The results are presented in Table 3. The Chi-Square test identified statistical significance in relation to the respondents’ age only for the answer related to personal attitudes/opinions (P=0.003) between the age group 20–29 (60.0%) and the age group 30–39 (20.0%). Regarding the gender of the respondents, statistical significance was found for the variable illustrations (P=0.038), which interestingly were more studied by the male (30.2%) than the female (15.2%) respondents. A statistically significant difference was not found in relation to the respondents’ length of scientific work and their vocation.

Table 3. Type of information that respondents look for in newspapers

Type of information	Percentage
Historical data to check and complete original data from other sources	51.4%
Linguistic characteristics of the text	50.7%
Data on society and social movements	49.3%
Original historical data which were not recorded elsewhere	40.8%
Literary texts	37.3%
Personal attitudes/opinions	26.8%
Advertisements	26.8%
Illustrations	19.7%
Other	8.3%
Graphical characteristics of newspapers as a physical object	7.7%
Editorials	7.7%

Newspapers used in writing the last scientific paper

In the next few questions, the authors wanted to find out how did the respondents use newspapers in their last scientific paper. The majority of the respondents indicated that they used national newspapers in their last paper (n=102, 71.8%), while less than half consulted foreign (n=70, 49.3%) and local (n=61, 43.0%) newspapers. The Chi-Square test did not identify statistical differences in relation to the age, gender or vocation of the respondents, but statistical significance was found according to the length of scientific work only for the variable national newspapers (P=0.022) among the respondents who have worked in the field between 10 and 20 years (80.0%) and those respondents who have worked between 3 and 5 years (35.7%).

As can be seen in Table 4, the newspapers published after the year 2000 were used by more than half of the respondents in their last paper (n=79, 55.6%). For their last paper, around a third of the respondents consulted newspapers published in the first half of the 20th century (n=54, 38.0%) and published in the second half of the 20th century (n=44, 31.0%). The least used were newspapers published in the 19th century (n=37, 26.1%) followed by newspapers

published at the end of the 18th century (n=8, 5.6%). The Chi-Square test showed statistical significance in relation to the length of scientific work for the answers: newspapers published in the 19th century (P=0.044, respondents who have worked between 10 and 20 years = 36.0%, none of the respondents who have worked under 3 years = 0.0%) and newspapers published in the first half of the 20th century (P=0.021, respondents who have worked between 10 and 20 years = 52.0%, none of the respondents who have worked under 3 years = 0.0%). A further statistical difference was identified according to the respondents' vocation for the following variables: newspapers published in the 19th century (P=0.026, scientific advisors = 80.0%, lecturers and senior lecturers = 0.0%), newspapers published in the first half of the 20th century (P=0.020, all scientific advisors = 100.0%, none of the lecturers and senior lecturers = 0.0%) and newspapers published after the year 2000 (P=0.026, lecturers, senior lecturers and scientific assistants = 100.0%, scientific advisors = 20.0%). The Chi-Square test did not reveal statistical significance according to the age and gender of the respondents.

Table 4. Period from which the newspapers were consulted in the last paper

Newspaper period	Percentage
Newspapers published after the year 2000	55.6%
Newspapers published in the first half of the 20 th century	38.0%
Newspapers published in the second half of the 20 th century	31.0%
Newspapers published in the 19 th century	26.1%
Newspapers published at the end of the 18 th century	5.6%

Answering the question “What encouraged you to use newspapers in your last paper?” less than a half of the respondents said that they used newspapers because of a lack of other appropriate primary sources of information (n=57, 40.1%), previous (positive) experience (n=54, 38.0%) and newspapers used in relevant papers of other authors (n=48, 33.8%). Some of the respondents were encouraged to use newspapers at the recommendation of colleagues/teachers (n=13, 9.2%) and at the recommendation of information specialists (archivists, librarians) (n=1, 0.7%). More than a third of the respondents were motivated to use newspapers because of information relevant to their specific research areas such as linguistics (n=39, 20.4%). The Chi-Square test identified statistical significance in relation to the respondents' age for the answer “recommendation of colleagues/teachers” (P=0.040, age group 30–39 = 16.4%, age groups 20–29, 50–59 and 60–69 = 0.0%), which was also statistically significant according to the length of scientific work (P=0.004, respondents having worked between 5 and 10 years = 23.3%, respondents having worked under 3 years = 0.0%). In relation to the gender of the respondents, statistical significance was determined for the answer “because of a lack of other appropriate primary sources of information” (P=0.032) in that more male (53.5%) than female respondents (34.3%) reported this answer. Moreover, statistical difference was found in relation to the respondents' vocation for the variables previous (positive) experience (P=0.043, scientific advisors = 100.0%, teaching and research assistants = 24.0%) and recommendation of colleagues/teachers (P=0.004, senior assistants 34.6%, assistant professors = 2.9%).

Respondents were then asked about information pathways in finding newspapers for their last paper. The results presented in Table 5 show that the first step on average was related to searching the Internet (mean 2.31) followed by searching databases (mean 3.01) and library catalogues (mean 3.33). The next steps on average were searching through reference publications such as encyclopaedias, dictionaries, almanacs, etc. (mean 4.08), browsing archival material (mean 4.42), guidelines/recommendations of other persons (mean 5.24) and browsing printed material on the library shelves (mean 5.26). The last two steps on average

were finding newspapers by accident while looking for other sources (mean 5.86) and searching the archival finding aids (mean 5.91). The ANOVA test showed statistical significance in relation to the age of the respondents for the step involving searching the Internet ($P=0.000$), which was initially consulted by more respondents from the age group 50–59 (mean 1.36) than from the age group 40–49 (mean 3.03). Statistical significance was also found in relation to the length of scientific work for the step browsing printed material on the library shelves ($P=0.043$), which was consulted early in the process by respondents who worked more than 20 years in the field (mean 3.71) than respondents who have worked between 3 and 5 years (mean 6.60). The T-test did not identify statistical significance related to the respondents' gender, and the ANOVA test did not reveal statistical differences in relation to vocation of the respondents.

Table 5. Information pathways in finding newspapers

Information pathways	Mean
Searching the Internet	2.31
Searching databases	3.01
Searching library catalogues	3.33
Searching through reference publications	4.08
Browsing archival material	4.42
Guidelines/recommendations of other persons	5.24
Browsing printed material on the library shelves	5.26
Finding newspapers by accident while looking for other sources	5.86
Searching the archival finding aids	5.91

Experience with using newspapers

To the question “Please describe any difficulties in using newspapers as a source of scientific information” respondents mostly gave answers related to the unavailability of digitized newspapers or journals ($n=40$, 20.9%). A small number of the respondents reported a lack of bibliographic data in digital newspapers (for example references, titles, keywords, indexes, catalogues) ($n=9$, 4.7%), the unavailability of old print newspapers ($n=8$, 4.1%), the time consuming aspect of searching newspapers ($n=7$, 3.7%), the low quality of digitized papers and unreliable information ($n=5$, 2.6%), the high price of access to digital newspapers ($n=5$, 2.6%), the complicated rules associated with borrowing and using newspapers in the library ($n=4$, 2%), the impossibility of using old and damaged material ($n=4$, 2%), the vastness of information and lack of organized material in the institutions ($n=3$, 1.6%) and the length of distance from the institution which possesses the material ($n=3$, 1.6%). The smallest number of respondents indicated the impossibility of using newspapers outside of the library and copying the newspapers ($n=2$, 1%), difficulties with browsing digital versions ($n=2$, 1%), the time consuming aspect of searching rare and old newspapers ($n=2$, 1%), the length of time required to stay at the library ($n=2$, 1%), the specific area of interest ($n=2$, 1%), the protection of the full text and copyrights ($n=2$, 1%), the inappropriate format of web pages ($n=1$, 0.5%), the relatively limited choice of newspapers ($n=1$, 0.5%), errors in newspaper texts ($n=1$, 0.5%), the poor quality of the microfilm ($n=1$, 0.5%), high subjectivity ($n=1$, 0.5%), the large format of newspapers ($n=1$, 0.5%) and the slow process of digitization in Croatia ($n=1$, 0.5%).

When asked to describe what would facilitate newspaper use in their future research the respondents pointed to the further digitization of newspapers in Croatian and foreign institutions ($n=38$, 19.8%); the availability of digital versions (open access, full text) ($n=36$, 18.8%); easier and quicker searching of digital versions with the help of search engines,

keywords, catalogues, and indexes (better organization and structure of the data) (n=23, 12%). A smaller number of respondents indicated the availability of old newspapers in print form (n=7, 3.7%), additional services (the possibility to archive, print and copy old newspapers, online orders of digital newspapers) (n=5, 2.6%), subscriptions to the national and international databases in the humanities and social sciences (n=3, 1.6%), medium (e-reader) and financial support (n=2, 1%), more varied kinds of texts in the corpus (n=2, 1%), the same content in print and digital versions (n=2, 1%), less restrictive rules related to borrowing the material (more time to use it) (n=2, 1%), more convenient working hours of the institutions which hold the material (n=1, 0.5%), more material from older periods (n=1, 0.5%), the quality of scan and records (n=1, 0.5%), more microfilm material (n=1, 0.5%) and better systematic organization of newspapers in libraries and archives (n=1, 0.5%).

Concluding discussion

This research started from the hypothesis that newspapers are a relevant information source for historians and linguists, but their potential is not fully used because of limitations in the access to newspaper collections and obstacles in searching and retrieving information from newspaper content. Several sets of results confirmed this hypothesis.

The majority of respondents use newspapers occasionally, but if we aggregate the number of respondents who use newspapers in their research, regardless of how often they use them, the total number is significantly high: 74.3%. Although the average mean of assessing the importance of newspapers as an information source for scientific work was 2.94, 37.7% of the respondents assigned a high level of importance to newspapers as an information source. This confirms the premise that newspapers are used and perceived as a useful information source in scientific work. The reasons for not using newspapers lie primarily in the fact that some topics or areas of scientific research are not represented in newspapers. Still, the respondents don't consider newspaper information reliable and credible, and that is also one of the constraints.

The majority of respondents prefer the digital format of newspapers because of better accessibility and search options when they are available, yet almost a third of the respondents answered that they had a need to consult original print newspapers even though they had digital versions of the newspapers available. The reasons stated for this show that the respondents have a habit of using print versions and that the original format provides them with a sense of authenticity, among other things.

This study provided answers to the three research questions with which the authors began. The answers given to the question regarding the kind of information historians and linguists look for in newspapers reveal the need for following types of information: historical data used to check and complete original data from other sources, linguistic characteristics of the text, information about society and culture, original historical data which are not recorded elsewhere and literary texts which are not published elsewhere. The difficulties that researchers encounter when using newspapers can be grouped into two main categories: unavailability of newspapers (a lack of digitized versions and constraints in gaining access to historical print collections) and the time consuming aspect of the search process (a lack of bibliographic data in digital newspapers and poor search options and the time consuming aspect of searching for information in print versions).

Finally, the answers to the last research question – “What would enhance researchers’ newspaper use in future research” – reveals a need for further digitization of newspapers in Croatian and foreign institutions with open access to full texts as well as a need for better organization and structure of the data. Interestingly, many respondents indicated the need for additional services, such as the possibility to archive, print and copy parts of newspapers.

The results presented in this paper are part of a larger study that aims to investigate the information behaviour and user needs of Croatian academics and scholars from the social sciences and the humanities. It is expected that further research will give deeper insight into the behaviour and needs of newspaper users in the academic context. Additionally, results gained from this research could be used in developing and implementing newspaper preservation policies on the national and institutional level. Croatian cultural heritage institutions are currently dealing with deterioration of newspaper collections and are often forced to restrict the access to and use of such newspapers, especially historic ones, for limited periods of time during their restoration or digitization for example. Users, particularly academics are often frustrated and unsatisfied if they don’t have continuous access to newspaper collections. As this research showed scholars are also quite unsatisfied if they are not provided by the digital infrastructure that enhances their user experience and helps them find the necessary information quickly and accurately. Although the number of digitized (historic) newspapers is increasing (e.g. Croatian Historic Newspapers project at the National and University Library) there are still many valuable newspaper collections dispersed in Croatian heritage institutions that still need to be digitized. Unfortunately, it seems that those newspapers that are in digital format usually are not designed (search options, interface design) based on thorough and extensive user surveys. On the other hand, contemporary newspaper collections are in the domain of publishers which seem not to prioritize them as research material and it is not evident what long-term preservation policies they apply. Evidently, there are still many challenges to overcome in preserving, making accessible and enhancing usability of newspaper collections.

References

Allen, R. B. and K. A. Johnson. 2008. Preserving digital local news. *The Electronic Library* 26, 3 : 387-399.

Allen, R. B. and R. Siczekiewicz. 2010. How Historians use Historical Newspapers. *Proceedings of the American Society for Information Science and Technology* 47, 1 : 1–4.

Anderson, I. 2004. Are You Being Served? Historians and the Search for Primary Sources. *Archivaria* 58: 81-130.

Case, D. O. 2012. Looking for Information: a survey of research on information seeking needs and behaviour. 3rd ed. Emerald Group Publishing.

Flavian, C. and R. Gurrea. 2007. Perceived substitutability between digital and physical channels: the case of newspapers. *Online Information Review* 31, 6 : 793-813.

Fleming, P. and E. King. 2009. The British Library newspaper collections and future strategy. *Interlending & Document Supply* 37, 4 : 223– 228.

Hassan, L.; Wade, S. and J. Wilkinson. 2012. The Impact of Digitisation Projects on the Work of Local Historians. UK Academy for Information Systems Conference Proceedings 2012. Paper 2. Accessed: 2014-06-22. Retrieved from: <http://aisel.aisnet.org/ukais2012/2>.

Ingwersen, P. and K. Jarvelin. 2005. The Turn: Integration of information seeking and retrieval in context. Dordrecht: Springer.

Kanellopoulos, D. and S. Kotsiantis. 2012. Evaluating and recommending Greek newspapers' websites using clustering. *Program: electronic library and information systems* 46 , 1 : 71-91.

King, E. 2005. Digitisation of newspapers at the British Library. *Serials Librarian* 49, 1-2 : 165-82.

Krtalić, M. and D. Hasenay. 2012. Newspapers as a source of scientific information in social sciences and humanities: a case study of the Faculty of Philosophy, University of Osijek, Croatia. *World Library and Information Congress, 78th IFLA General Conference and Assembly*, 11-17 August 2012, Helsinki, Finland. Accessed: 2014-06-22. Retrieved from: <http://conference.ifla.org/sites/default/files/files/papers/wlic2012/119-krtalic-en.pdf>

Lanz, D., F. Zarndt, S. Boddie, T. Powell and V. Salgotra. 2009. The new Papers Past: an international collaboration between New Zealand, India, Germany, and the United States. *OCLC Systems & Services: International digital library perspectives* 25, 4 : 287-294.

Maidel, V.; Shoval, P., Bracha, S. and M. Taieb-Maimon. 2010. Ontological content-based filtering for personalised newspapers: A method and its evaluation. *Online Information Review* 34, 5: 729-756.

Massis, B. E. 2012. What's new in libraries. Local newspapers and the library: a "community asset". *New Library World* 113, 11/12 : 614-618.

Sivankutty, V. S. and J. Sudhakaran. The use of online newspapers among librarians in India. 2011. *Library Hi Tech News* 1 : 10-12.

Tibbo, H. 2002. Primarily History: Historians and the Search for Primary Source Materials. *JCDL*, 1-10.

Whitlam, S. and H. Preston. 1998. Sports journalism as an information resource: a case study. *New Library World* 99, 5 : 194-204.