

ACADEMIC TEACHERS' PREFERENCES IN SELECTING SCIENTIFIC DATABASES

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Abstract. *The objective of the paper was to determine the preferences of academic teachers in the selection of databases of scientific publications. Material consists of the results of research carried out with the diagnostic survey methods carried out with the questionnaire technique among the scientific employees and students of the selected Polish higher schools: University of Life Sciences in Lublin, University of Agriculture in Krakow. 135 scientific employees and 140 full-time students of the second cycle studies participated in the survey. University teachers the most often used publications in scientific journals and publications in the Internet. All students that took part in the questionnaire used scientific publications in the Internet and information included in the Internet. Databases of the Polish scientific publishing houses, Elsevier database, and Google Scholar database are the most useful in the scientific work. Students search for publications only in the Polish databases of publishing houses and Google Scholar base.*

Keywords: *scientific publication, Internet, library, teachers, database.*

Introduction

The education process at higher schools, particularly at universities is strictly related to scientific research carried out by researchers and teachers. The present regulations on the education quality provide that a given subject can be taught by a person whose scientific achievements include publication concerning a particular module. Unfortunately, the policy of evaluation of scientific disciplines forces the university employees to publish in journals indexed in Web of Science (WoS) or SCOPUS database. Therefore, the most valuable papers are often published in journals to which both scientific employees and students have a limited access. Even more often, periodicals publish only electronic versions of scientific papers with a free access to abstracts or the first page of the paper. Such

policy forces employees and students to search in databases for publications including full texts. However, even databases including abstracts of papers are often a valuable tool to search for publications necessary in the process of teaching students, since lecturing at the university level requires, *inter alia*, the use of the newest knowledge from a given field. Also students, that write control papers and projects, particularly diploma theses are obliged to use the current knowledge on a given subject. Therefore, in the world of the Internet, electronic databases of scholarly information have a significant tasks and roles to meet in the teaching process carried out at universities.

Literature review

A dynamic growth of information techniques in recent years has had a great impact on the media communication process (Lorencowicz, Koszel, Kocira, & Uziak, 2017). Development of those techniques considerably influenced the interaction inside communicative groups and intercultural communication (Bugajski, 2017). Changes in communication and searching for information concern greatly also scientific employees and students (Cupiał, Szelağ-Sikora, & Kuboń, 2018; Cupiał, Szelağ-Sikora, Sikora, Rorat, & Niemiec, 2017). Traditional search for information in journals and printed books is replaced with searching for articles and other publications in electronic databases (Milewska, 2012). It is mainly related to the amount of available information. Many journals have recently stopped to issue a printed version and instead issues an electronic version as a primary one. Also, a great number of published articles influences the fact that researchers are not able to find all articles which they should know before they start studies in a given field. Access to articles issued in an electronic version enables fast search for gigantic databases and finding interesting papers within a given scope (Lorencowicz, Bejgrowicz, Kocira, & Lorencowicz, 2013). An opportunity to use information technology methods for analysis of the publication content is a very favourable feature. It is also related to indexing of keywords and a possibility of searching for papers on the investigated issue as well as to more advanced methods of analysis.

Moreover, students in the education process even more often use the Internet and base their education mainly on the use of information techniques (Lorencowicz, Koszel, Kocira, & Uziak, 2015). They use of electronic publications mainly for writing control and diploma theses.

The objective of the paper was to determine the preferences of academic teachers in the selection of databases of scientific publications.

Methodology

Material consists of the results of research carried out with the diagnostic survey methods carried out with the questionnaire technique among the scientific employees and students of the selected Polish higher schools: University of Life Sciences in Lublin, University of Agriculture in Krakow. The questionnaire includes single and multiple choice questions. The questionnaire consists of five parts:

- printer's imprint,
- frequency of use of various forms of scientific publications and using digital resources that are made available by the Polish and foreign scientific publishing houses and on the Universities' webpages,
- place and frequency of using the publication uploaded in the Internet (both in the Polish and foreign scientific databases),
- criteria of searching for publications in scientific databases and assessment of usefulness of the selected databases in a scientific work
- making own papers available in Open Access mode and purchase of paid scientific articles uploaded in the Internet.

135 scientific employees (43 women and 92 men) and 140 full-time students of the second cycle studies participated in the survey. From among 135 investigated scientific employees, the most numerous groups were persons aged 36-45 - 41%. The second group with regard to the size, included respondents aged 40-60 - 29%. While, the so-called "young scientists" namely scientific employees aged up to 35, constituted only 12%. On the other hand, the oldest employees aged more than 60 years constituted 18% of the investigated group.

Analysis of the respondents with regard to the scientific title and degrees shows that the most numerous group in the investigated group were PhDs (36%) and the least -MScs (13%). The highest participation in the investigated group of respondents were (32%) PhDs with a habilitation degree and professors with titles - 19% of the investigated group. Such participation of particular groups of respondents corresponds to the structure of employment at the Polish universities when the biggest number of employed doctors and doctors with a habilitation degree is employed.

Research results

Scientific employees answering the question concerning the use of various forms of publishing information could choose any number of responses. The highest number of respondents used scientific journals published in the printed form - 97% (Fig. 1). The second position was taken by publications in the

electronic journal - 81% of respondents. 78% of respondents prefers books. Only 73% of respondents in their scientific work use the Internet pages. Such a low interest results mainly from the lack of trust to information included in the unauthorised Internet pages.

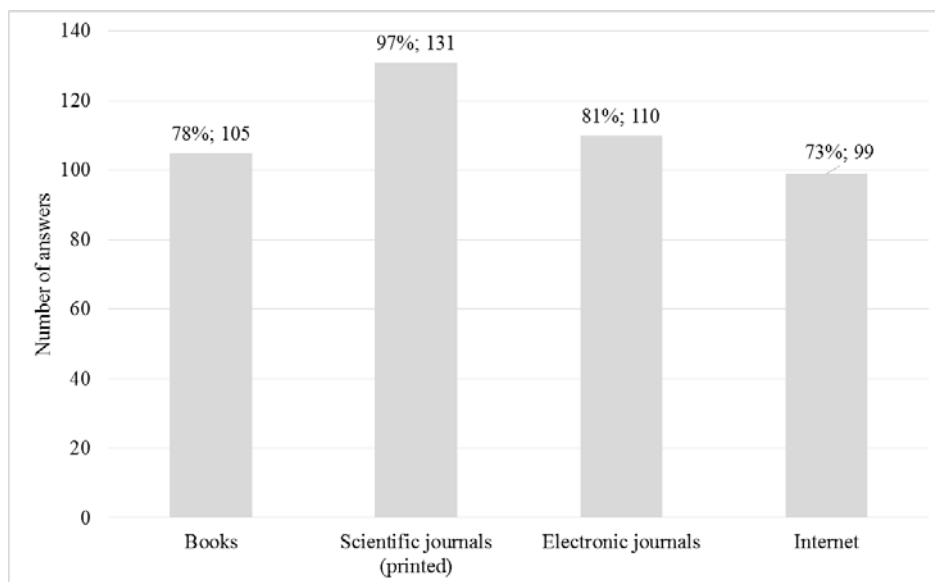


Figure 1 Using various forms of scientific publication by scientific employees

Students answering the question on the use of various forms of scientific publications gave diametrically different answers than scientific employees. All participants in the study emphasised that when searching for information needed for writing diploma and control theses they use both publications in the Internet and usual Internet pages (Fig. 2).

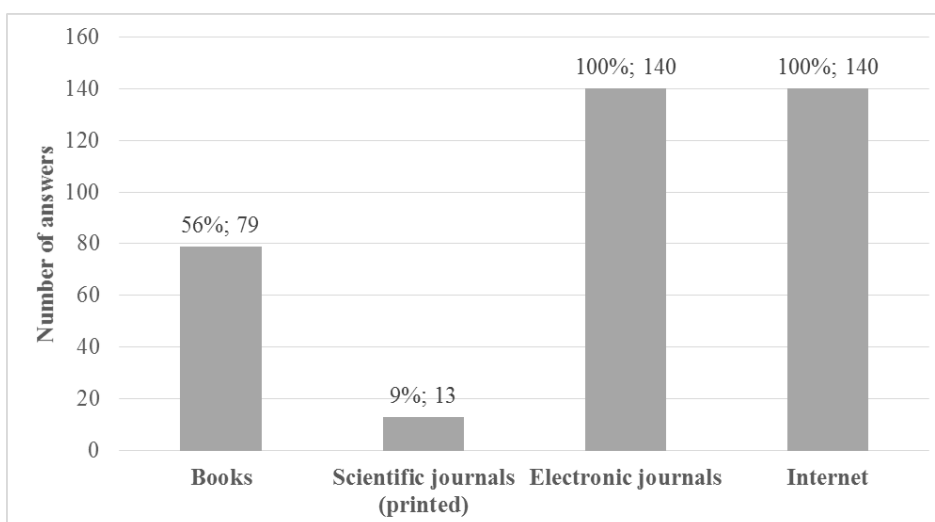


Figure 2 Using various forms of scientific publication by students

The fact that 46% of students that take part in the study, use books, is interesting and surprising information. The lowest number of respondents used scientific journals published in the printed form and this situation is completely different than in the analysed group of scientific employees.

Another question answered concerned the frequency of using digital resources that are made available by the Polish and foreign scientific publishers on the webpages of the university. This question was answered by scientific employees choosing one answer for each of the digital resources. More than half of the investigated group often used national publishers (Fig. 3). Also, the most numerous group of respondents often used foreign publishing houses. The biggest group (43 people) often reached for digital resources of the university webpages.

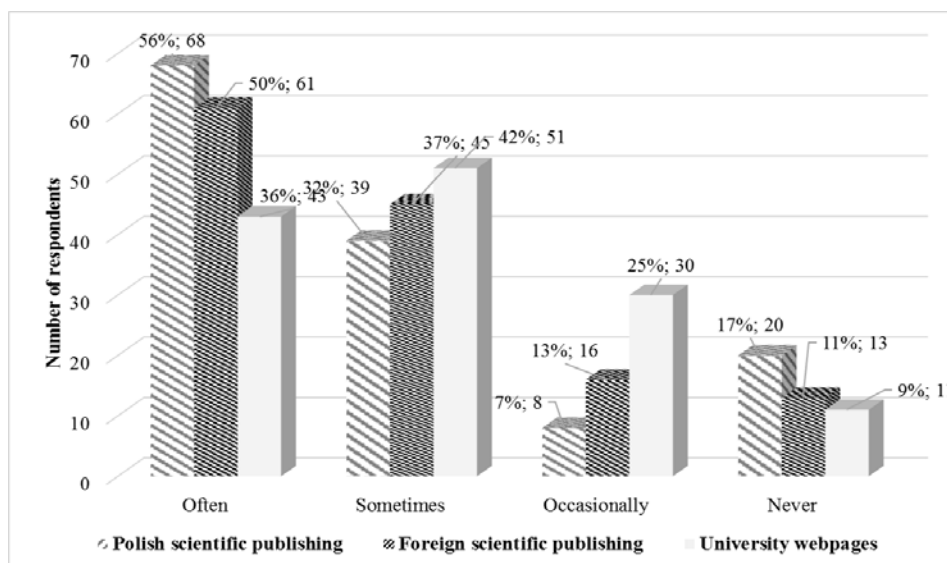


Figure 3 Frequency of using digital resources that are opened by the Polish and foreign scientific publishing houses and on the university webpages by scientific employees

Scientific employees the most often search for and read publications uploaded in the Internet during their stay at home and work (51%) (Fig. 4). However, as much as 17% of respondents only at home uses scientific publications uploaded in the Internet. The attention should be noted that none of the respondents indicated that only in the library uses scientific publications posted on the Internet. Such a situation results from the possibility of access to scientific publications from own computers at work or at home. Searching for scientific articles in the Internet was marked by 31% of respondents.

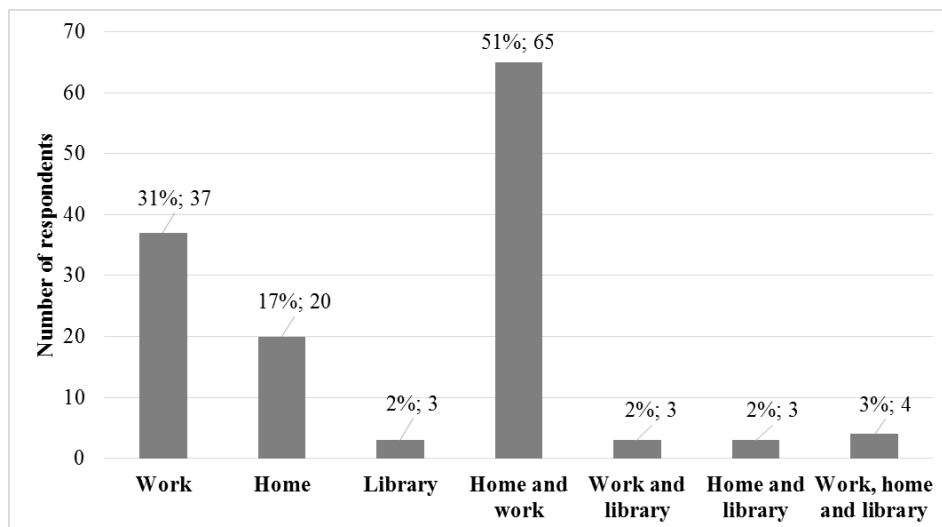


Figure 4 Place of using scientific publications placed in the Internet

In the next question, scientific employees marked any number of the selected national search engines and databases that they use in their work. They also included Google Scholar to the group of databases they use, mainly due to its Polish language version and searching for articles in Polish journals and databases. The scientific employees the most eagerly used the Polish databases of scientific publishers (Fig. 5). Google Scholar was on the second position. The remaining databases were used by less than a half of the respondents. The opinion of employees that filled in the questionnaire is that "e-publikacje" database of the Polish science becomes more and more popular.

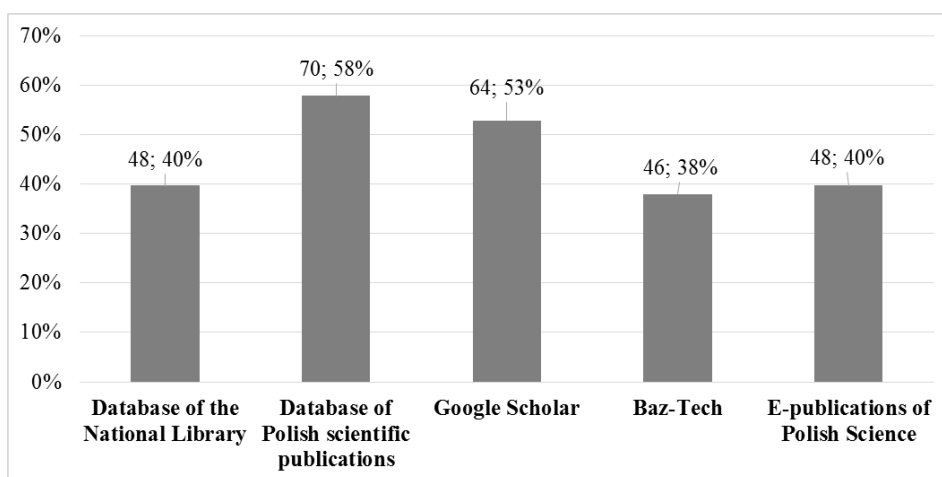


Figure 5 Using selected Polish scientific search engines and databases by scientific employees

Students who answered the same question as scientific employees had a completely different preferences in using search engines and databases. They the most eagerly used Google Scholar search engine (Fig. 6). Slightly more than a half, searched for publications in the databases of the Polish publishing houses. Unfortunately, students hardly used the other databases. It is a disturbing phenomenon that requires wider research which would allow for determination and reduction of the reasons of such a situation.

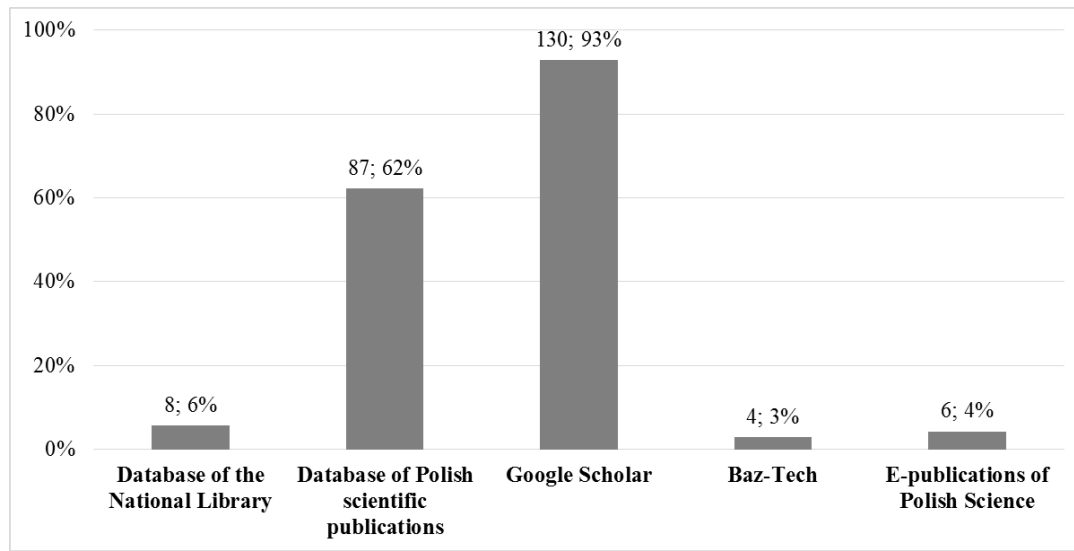


Figure 6 Use of selected Polish scientific search engines and databases by students

Scientific employees that participate in the research represented agricultural and technical sciences, therefore for the analysis they selected the most popular databases that collect publications from those scientific fields. Over 71% of respondents used Elsevier base. The following databases exceeded also the threshold of 50%: Web of Science and Springier. Such an interest in the above databases results both from scientific disciplines that were represented by the respondents, but also from even a greater pressure of both the Ministry of Science and Higher Education and authorities of particular departments, where respondents work, on publishing in journals with a high Impact Factor (IF).

One of the last questions in the questionnaire was a selection of search engines and databases that are the most useful in the scientific work (multiple answers).

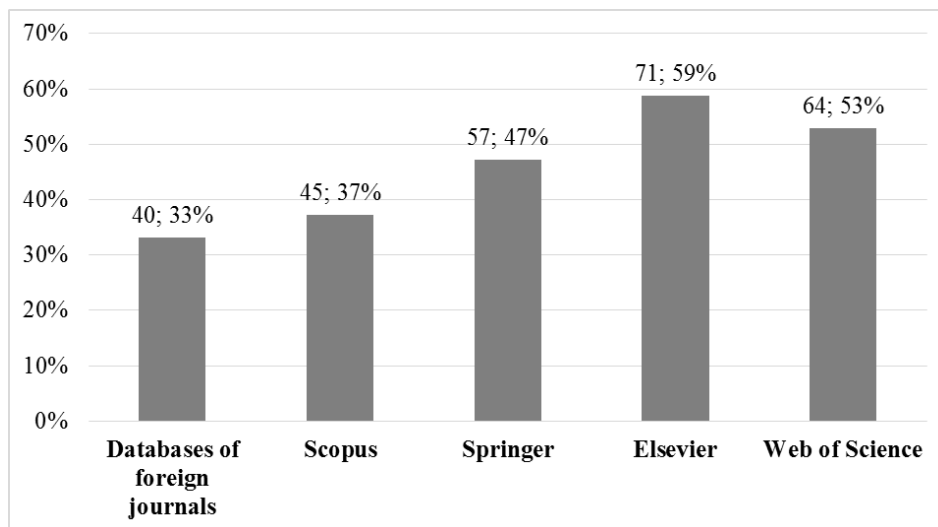


Figure 7 Use of selected foreign scientific search engines and databases by scientific employees

With this regard, respondents evaluated that both the Polish databases of publishers and Elsevier base are useful alike (Fig. 8). The search engine of scientific publication Google Scholar were found useful by 50% of respondents. On the other hand, the lowest number of persons marked "e-publikacje" database of the Polish science. In comments to this answer, the respondents wrote that it is still not much known in the scientific environment.

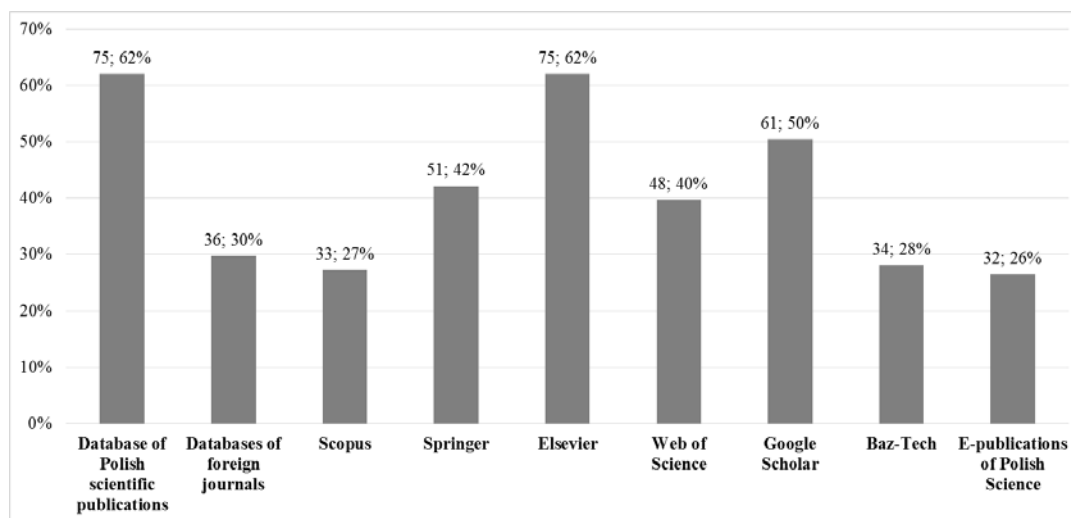


Figure 8 Selected scientific databases useful in scientific work

When talking about the criteria of searching for scientific publications in databases, the employees that participated in the research used keywords the most often (Fig. 9). Surprisingly not many people searched with a criterion of the paper

title. Therefore, it is also very significant to determine in the published scientific papers relevant key words according to which it will be possible to search for articles on a given subject.

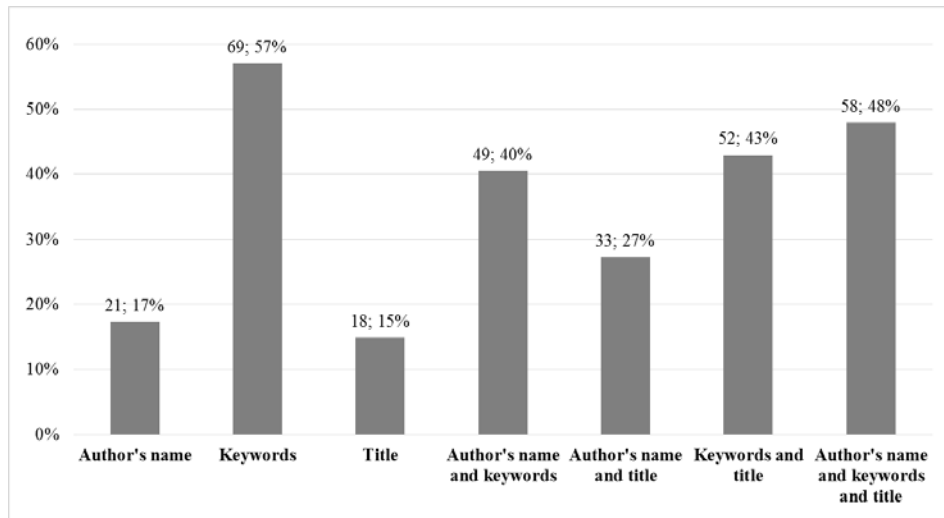


Figure 9 Searching criteria of scientific paper in databases

The results obtained by the authors are compliant with the research by Zmitrowicz and Weryho who investigated the use of data bases and electronic journals by scientific employees. They observed that 98% of scientific employees uses digital materials located in the data of both Polish and international journals (Zmitrowicz & Weryho, 2011). Next to selection of a relevant data base and searching for correct criteria, Bednarek-Michalska and Derfert-Wolf concluded that open access to publications is a significant issue related to the use of publications from electronic data bases by scientific employees (Open Access) (Bednarek-Michalska & Derfert-Wolf, 2008).

Porter emphasizes, on the other hand, the problems with the use of data bases for research, which with regard to the characteristics of scientific data differ with longevity, volume, variety and manner of use (Porter, 2018).

Nahodko concluded that representatives of medical, technical sciences and sciences in general use electronic bases of publications the most often while scientists of social sciences and humanities still very actively use traditional carriers (Nahodko, 2007)

Conclusions

University teachers the most often used publications in scientific journals and publications in the Internet. All students that took part in the questionnaire

used scientific publications in the Internet and information included in the Internet.

University teachers participating in the study, the most often used digital resources that were made available by the Polish scientific journals.

The respondents the most often used publications in the Internet in the place of living. Over 90% of respondents never used electronic publications in a library.

Databases of the Polish scientific publishing houses, Elsevier database, and Google Scholar database are the most useful in the scientific work.

Students search for publications only in the Polish databases of publishing houses and Google Scholar base.

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