Open access and information literacy for PhD students

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Abstract: This article is dedicated to develop information literacy courses for PhD students. One survey was developed to doctoral school at Transilvania University of Brasov. It was focused on information literacy and needs of PhD students, current practices and strategies on documentation in research process. It will be present survey results and recommendations.

Key Words: information literacy, PhD students, citations, bibliometric, copyright

1. INTRODUCTION

In information society, researchers have at disposition new technologies and services that allow them to discover, locate, gain access to and create information resources on their desktops. However, there is evidence that research information skills have not kept the steps with rapid change in this area. This raises important questions about how researchers acquire the appropriate skills in information handling, and the take-up of the training opportunities provided. [5] Information literacy concepts have to be harmonistic with this level of research. PhD students are next researchers and they need special skills to be successful in information explosion and information technology developing.

To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.

Producing such a citizenry will require that schools and colleges appreciate and integrate the concept of information literacy into their learning programs and that they play a leadership role in equipping individuals and institutions to take advantage of the opportunities inherent within the information society.

Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand “Final Report” of the ALA Presidential Committee on Information Literacy (1989)

"an intellectual framework for understanding, finding, evaluating, and using information--activities which may be accomplished in part by fluency with information technology, in part by sound investigative methods, but most important, through critical discernment and reasoning.

Implications of technology evolution aspects are: the evolution of technology increases the moral dilemmas because it multiplies the available options, calling for even more cautious discernment and reasoning. On the other hand, the strengthening of technology and its saturation of all aspects of life, creates a tendency, in making essential decisions, to not take into account or disregard important or even crucial data that cannot be adequately or precisely quantified. [2]

Aristotle and information literacy principle:
Four main principles:
-education must be a continuing process that has no end except further education,
-the state is a plurality that should be made into a community by education,
-states should be responsible for educating their citizens,
-education should be common to all.

Four arguments for public education:
-from constitutional requirements
-from the origins of virtue
-from a common end to be sought by all citizens
-from the inseparability of the individual and the community. [1]

INFORMATION LITERACY IS "the adoption of appropriate information behaviour to identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of information in society."

“PhD students can be said to have the same, if not a greater, need to be information literate as any other university student. But there is one information related
aspect that seems to be of a greater importance for PhD students: the ability to handle large amounts of research information is of particular importance for this group of students. Their studies are often taking place over a long period of time and they tend to penetrate their subjects thoroughly, hence they are subjected to and collect large amounts of information. The majority of the students participating in the course indicated that it is very important to be able to organize and develop rational ways for easy and quick access to information.” [3]

Information management for knowledge creation, information management for PhD-candidates, is one project developed by University of Bergen, Norway in collaboration with Bergen University College, Norwegian School of Economics and Business Administration, University of Oslo Library, University of Aalborg Library http://inma.b.uib.no/. [4] The aim of the project is to develop information literacy education modules for PhD students. The modules will be tailored to this target group by taking into account their information searching behavior and information needs, as documented in the existing literature and as revealed by the project own findings. The modules will contain open access online resources and teaching portfolios for seminars within PhD programmed. The project will be run as collaboration between five Nordic academic libraries. [5]

2. CASE STUDY AT TRASILVANIA UNIVERSITY OF BRASOV

The first institutional repository used by research departments of the university was developed in Brasov. The members of research departments may self-archive here their published scientific articles and the master thesis of master research directions. This documentary source, this documents archive for open access to scientific research can be a very rich and good source on information and documentation. http://aspeckt.unitbv.ro/dspace/

We surveyed doctoral school PhD candidates from Transilvania University of brasov. Our data were collected in the first semester of 2010, during 2 weeks. We used one electronic survey, using this free tools site: https://www.surveymonkey.com. The survey was called: Information literacy for PhD candidates. We sent invitation to participate at this study on all their discussion list, The sample was validated from the point of view of women-men proportion and from the point of view of the respondents’ proportion in distribution of year of doctoral school stage and distribution on PhD field research.

3. METHODS AND RESULTS

Our survey contained two distinctive parts: information literacy and a scientometric elements part. The scientometric elements survey made use of a Likert scale. The Information literacy section consisted of 5 questions. Questions one through three were concerned with gathering demographic data.

![Figure 1: Domain were respondents are subscribing with application](image1)

The most respondents, 78.8%, belong to engineering field, which is a traditional domain within Transilvania University, and the most active in the survey were the first year PhD students, 50.5%. (Fig.1)

![Figure 2: Year of doctoral school of PhD students](image2)

![Figure 3: Gender of respondents](image3)

![Figure 4: Difficulties of respondents in writing thesis](image4)
Regarding the difficulties in elaborating the PhD thesis, 59.1% of the PhD students encounter obstacles in the documentation process, and 53.8% in the process of communicating experimental results. (Fig.4)

The main source of documentation is the scientific databases to which university has subscribed for 83.3% of the PhD students. The direct access journals are sources of documentation for 56.3% of the PhD students, and the university library represents the place where students get access to their resources for 46.9%. (Fig.5)

![Figure 5: Preferences of informational research](image)

Although they are the Google generation, only 24% access Google Scholar, Google Academic and only 26% institutional digital repositories. The PhD students possess a high level of knowledge concerning open access to information, 44.8%, and quotation, as a measure of scientific quality of articles, 37.9%. Their level is minimum in point of scientometric databases, 47.1%, of scientific production, 30.6%, and of institutional digital repositories, 31.4%. (Fig.6)

![Figure 6: Knowledge level on a scale from 1 to 3, 1-minimum, 3-maximum](image)

They have acquired their high level of knowledge on these subjects as it follows: 79% by individual study, 54.7% by doctoral school courses and 50% by participation in conferences. (Fig.7)
The PhD students’ greatest interest lies in practices and strategies for informational resources research, 66.7%, which is followed by knowing the publications in which they should publish their research studies, 60.9%, and open access to information, 57.5%. (Fig.8)

70% of the PhD students use References option from Microsoft Office 2007 for the management of the consulted documents and 35% RefWorks. (Fig.9)

4. CONCLUSIONS

The period of research and writing PhD thesis is an edifying stage in the future researcher’s development. During this period the PhD students must have research skills. The culture of information - which is necessary to any student through his/ her abilities to identify the need of information, to localize sources, to evaluate and use these sources efficiently, to use them in the process of learning and content creating and then to be able to generate knowledge - becomes impetuously necessary during the doctoral school. The dissemination of the PhD students’ research studies must be guided through presenting and acquiring knowledge of scientometrics, academic communication and critical evaluation of the obtained information. A surprise element in the survey is the fact that a small percentage of PhD students use Google Scholar as a source of information. Google Scholar is a free scientometric base which comprises only documents that are academically indexed by Google. Every indexed document has the indexed on Google Scholar quotations enclosed as well. Another surprise is the low level of knowledge regarding the scientometric databases, especially because the most PhD students use as main sources of information the databases to which university has subscribed, among which there are also the two scientometric databases, ISI Web of Science and Scopus. We think that the fact that they do not know the institutional digital repositories, free resources comprising scientific production of universities, is at their disadvantage and at the disadvantage of the scientific research community. The principles of open access to information, namely the green way, the institutional digital repositories should be promoted in order to change the researchers’ mentality. The results of research studies do not achieve their mission if they are not displayed at the community’s disposal by open access. The fact that the majority of the PhD students, who know these notions, know them due to their individual study imposes the organization of some presentation of the above mentioned notions.

References

[1] Aristotles, Politics principles, VIII