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The Portuguese *Online Knowledge Library* (B-on): a year of academic research at Portucalense University

Manuela Barreto Nunes^a, Marta Abelha^b

^aUniversity Portucalense Infante D. Henrique, 4200- 072 Porto, Portugal, Interdisciplinary Centre for History, Culture and Societies – CIDEHUS, University of Évora, (mnunes@upt.pt).

^bUniversity Portucalense Infante D. Henrique, 4200-072 Porto, Portugal, The Coimbra's University Centre for 20th Century Interdisciplinary Studies - CEIS20, (mabelha@upt.pt).

Abstract

“B-on” is the electronic resources platform acknowledged by the Portuguese scientific community, providing a high number of scientific resources and electronic services. Portucalense University adhered to B-on in 2013. After a year, a study of use and evaluation of the professors’ satisfaction was conducted. This paper presents the results obtained through the application of a questionnaire and the analysis of statistical data supplied by the platform. Results reveal a medium level of compliance, although with high intensity and users’ satisfaction. More information literacy instruction is required in order to amplify and diversify the use of the tool.

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* Corresponding author. Tel.: +0-000-000-0000 ; fax: +0-000-000-0000 .

E-mail address: mabelha@upt.pt

1. Introduction

The Online Knowledge Library, usually known as *B-on*, is an electronic resources platform developed by the Portuguese Foundation of Science and Technology since March 2004. It provides the universities, scientific laboratories and higher education organizations in general with an unlimited and permanent access to several of the main national and international sources of knowledge, as online scientific journals and e-books.

The mission of *B-on* is to ensure the access to a high number of scientific publications, providing related electronic services to the Portuguese academic and scientific community. The platform works as a consortium, and the access to this range of services is only allowed to the adherent institutions, through their IP addresses. Up to now, 41 research and higher education institutions are members of this consortium.

B-on presents the following main goals:

- To promote electronic access to some of the major international knowledge sources;
- To play an active and participatory role in building a Knowledge Society;
- To encourage the consumption and production of scientific contents by the community;
- To encourage cooperation between national academic and scientific institutions;
- To facilitate the management of information of the national scientific output;
- To develop key skills in managing information and knowledge;
- To rationalize costs through a centralized negotiation with publishers and other content providers;
- To increase visibility, accessibility and dissemination of Portuguese scientific research and academic activity, enhancing their use and impact among the national and international scientific communities;
- To become a reference in the provision of electronic services and products that meets the needs of the various user groups;
- To develop and provide a preservation policy in order to ensure perpetual access to the publications available to its members. (B-on, n.d.)

In fact, *B-on*

made possible to all the national academic and scientific community – teachers, researchers and students – an easy access to the full papers of a relevant set of scientific journals published online by some of the most reputed scientific international publishers and database owners, in a scale economy made possible by the centralized purchase of contents. (Costa, 2007, p.1, translation by the authors)

By allowing the access to a high set of online full text papers and e-books, covering different areas of knowledge, this platform looks not only for the improving of the conditions of access to knowledge, but also to stimulate and increase the Portuguese scientific production (Costa, 2007). Besides being a content provider, the platform offers several advanced services to support learning and research, such as training, tutorials, preservation, special support for researchers, librarians, students, health professionals and publishers, access to the Journal Citation Reports, bibliographical analysis and other features of Thompson Reuters' Web of Science, such as the bibliographic manager (EndNote Web) and also administration features, including statistical data.

As Costa (2008), we also believe that *B-on* represents one of the most meaningful accomplishments in favor of the Portuguese scientific and academic community, offering as its main advantages the democratization and flexibility in the access and organization of scientific knowledge.

This paper pretends to disseminate and analyze the results of an evidence-based research centered within the academic community of the Portucalense University, a year after the introduction of *B-on* in its routines of information search and retrieval. The use of the resources and services provided by this platform was therefore subject to a descriptive and interpretative analysis. The results of the study, operated as evidences, will provide management indicators related to the return of the investment in contribution for the scientific production and learning, as well as capital information for the development of more adequate strategies of information literacy and divulging, in order to make the best use possible of the tool.

2. Context

Portucalense University is a small private university located in the second town of Portugal, the city of Oporto, in the northern part of the country. It has around 2.000 students and 140 teachers and researchers, and is divided into

four Departments: Law Studies; Tourism, Culture and Patrimony; Psychology and Education; and Economy, Management and Innovation. It offers ten graduation courses and 13 masters, giving its students the opportunity of specialization and lifelong learning through a wide range of post-graduations and short masters.

The Library is an important part of the university, and it supports the processes of learning and research of the academic community not only by providing the access to collections and traditional services, both in physical and virtual environments, but also managing the institutional repository and the access to the subscribed databases – *B-on* being the most important of them – and developing formal and informal sessions of information and digital literacy, including the production of guidelines for bibliographic styles and scientific publication.

To ensure the return of the investment made by the administration of the university in the subscription of *B-on*, corresponding to 34.000 euros, and to incite the academic community to use the platform, the library developed several information literacy training sessions, for teachers and students, besides numerous announcements and publicity through e-mail, advertisements, the university institutional newsletter and site, and also social networks such as Facebook.

The close collaboration with the academic community and the application of evidence-based principles in the library management led to a study that intends to start the evaluation of the use and impact of *B-on* and the importance of literacy sessions for the faculty members, looking for evidences that will help the making of informed decisions within the use of scientific information for learning and research purposes.

Evidence-based decision making is a rational model based on the use of research through scientific methods to gather quantitative and qualitative evidences. The evidences gathered should have consequences *for* the practice (identifying best practices and proposing new practices), *in* the practice (identification of problems and contradictions through the contextualization of professional experience and research results), and *from* the practice (measuring the results of the phenomena studied through the identification of the changes that resulted from the actions taken) (Todd, 2008). Such evidences will be shown in this paper, though the results reported relate to a larger study from which we present only the most significant findings.

3. Methodology

The methodological approach for this study thus follows the evidence-based research principles, supported by both background and foreground questions, as suggested by Booth (2004). Research looked for answers to background questions, whose results were found through statistical data provided by the platform reports and the answers to a questionnaire survey, such as: “Is *B-on* really having an impact in the search practices of teachers and researchers?”, “How many well succeeded searches were achieved during the first year of use?”, “Which knowledge area is using more the platform facilities?”. A range of foreground questions, whose answers were found through the survey, with both closed and open questions, and the crossing of data, were designed as follows: “How do teachers and researchers use the platform facilities?”, “Is the participation in information literacy sessions related to the intensity of their use of *B-on*?”, “For what purposes is the platform being used?”.

As pointed above, the techniques used for data collection were statistical reports provided by the platform and a survey with both open and closed questions; the survey was sent to all the universe of 141 teachers and the sample obtained corresponds to thirty-four ($n=34$) of them, that is, 25% of the population. All data were subject to interpretation, and some of the open questions gave place to the definition of qualitative categories to help the comprehension of the motivations lying under the answers. Also, some data were crossed in order to better understand their significance.

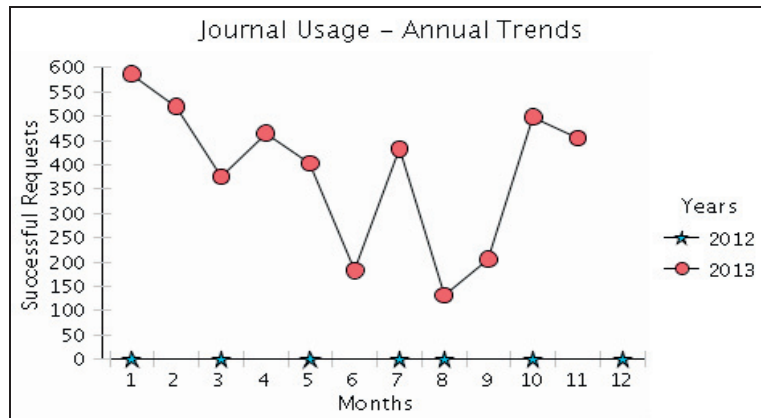
As this is the first phase of an evidence-based research on the impact of a big content aggregator and scientific research services provider, the analysis of the results is intended to be both descriptive and interpretative, providing evidences that will guide future researches and lead to better practices in the immediate future.

4. Results

4.1. Statistical reports

Statistical data collected from the *B-on* reports incurred in the number of downloads and its distribution through the months of the year, the most requested publishers and the most rated journals between January and November 2013.

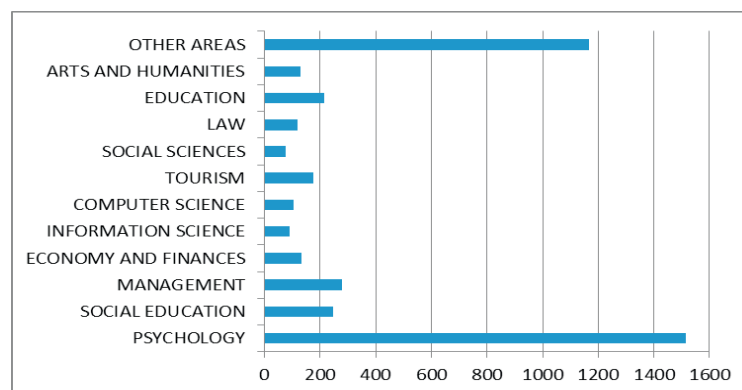
Being the total number of downloads 4.257, the first graph shows its monthly distribution. We can see that the months that correspond to a larger number of downloads were January, with 600, followed by February, with around 530, April (480), then July (460) and October and November, around 500. The months when the platform was less used correspond to June, August and September, all of them below 200 downloads.



Graph 1: Number of downloads and monthly distribution

This distribution can be better understood if it's noticed that the first two months correspond to the first literacy sessions and to a heavier effort of publicity related to the launch of the platform at the university. April corresponds to another training session, such as October. As July is the month before vacations in Portugal, maybe the high rate of downloads during this month can be justified by the preparation of the new academic year, but that is yet to be proved by findings that this study wasn't able to show.

What are the predominant knowledge areas of the most searched journals? Graph number 2 shows the knowledge areas, that were defined through the keywords and title information of the journals from where the downloads were obtained:



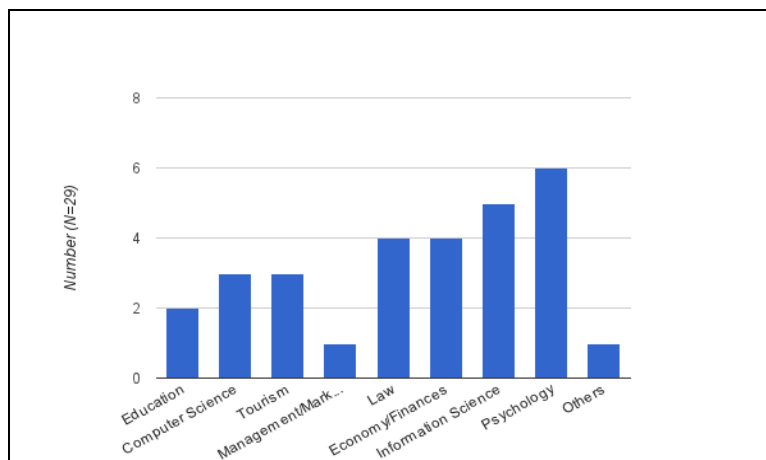
Graph 2: Knowledge areas of the most requested journals

Data shows that Psychology is by far the most requested area, followed by multidisciplinary journals (other areas) and, by far, by Management, Social Education, Education and Tourism. These knowledge areas are a reflection of the contents that are covered by the faculty courses and lines of research. The most important courses of the university are, by number of students, first Law, then Economy and only then Psychology. Nevertheless, neither Law, nor Economy are so well succeeded in their research sessions. Further in this paper, in the analysis of the questionnaire results, the reason of these outcomes will be better understood.

4.2. Survey results

The survey was applied to thirty-four teachers (N=34). From these, twenty-nine (N=29) use the resource regularly, while five never used it. Questioned about the reasons why they didn't use it, two said that they had never heard about it, and the other three presented the following reasons: "I never needed it", "I don't have much time for research, and when I do I prefer to search through Google scholar" and "I work at home and I can't access *B-on* from home". These responses show that, although a minority, there are still some teachers that don't use or care to use reliable and actual scientific resources, and lack computer and literacy skills to help them search through Internet using, for instance, the VPN service provided by the university; further research will help us understand some demographic and sociological characteristics of this group, which were not surveyed through the present questionnaire.

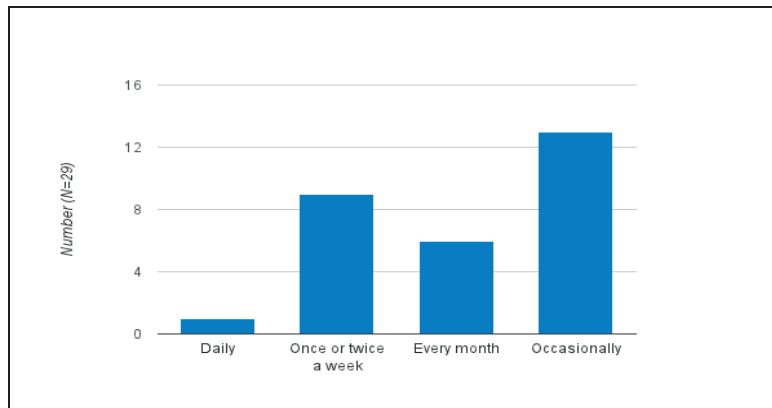
The research interests of the twenty-nine teachers that use regularly *B-on* are shown in Graph 3:



Graph 3: Research interests

Respondents that confirmed an effective use of *B-on* are mostly interested in the areas of Psychology (N=6) and Information Science (N=5), followed by Law and Economy/Finances (N=4 to each of them). When we cross these data with the statistical reports on the most requested knowledge areas, we can see that there is a coincidence, for respondents come mostly from the area of Psychology, which is in fact the most requested area in the platform. We can interpret that if all the Information Science researchers of the University answered the survey (N=5), that doesn't coincide with the most successful searches for the simple reason that this is a small area at the university, showing only the special concern of these researchers in participating in a survey that has to do with their own research interests. There is also a special interest revealed by teachers of Law and Economy/Finances, which doesn't result in equivalent well succeeded searches for reasons that will be pointed out further in this report.

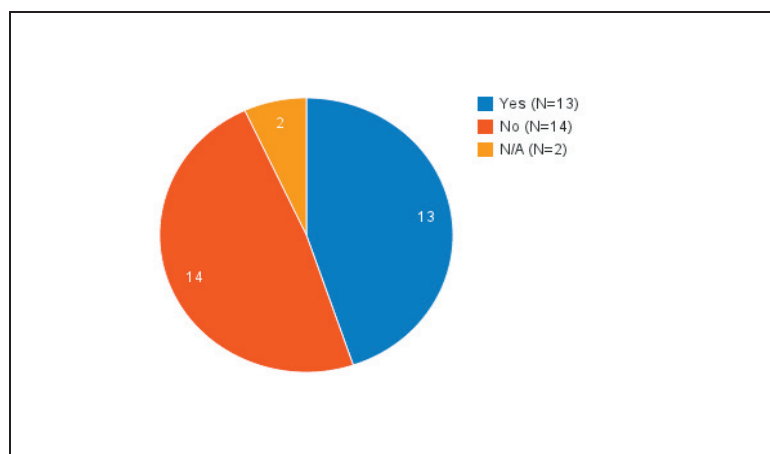
Graph 4 shows how often these individuals use the platform:



Graph 4: Regularity of use

Most respondents (N=13) use it only occasionally, although a significant number (N=9) recurs to the platform once or twice a week.

Trying to understand how systematically some of *B-on* facilities, such as the personal profile are being profited by the respondents, they then were asked if they had opened one. Graph 5 tells us that this feature is not yet used by all the respondents, but nevertheless conquered almost half of them (N=13 for yes, and N=14 for no):

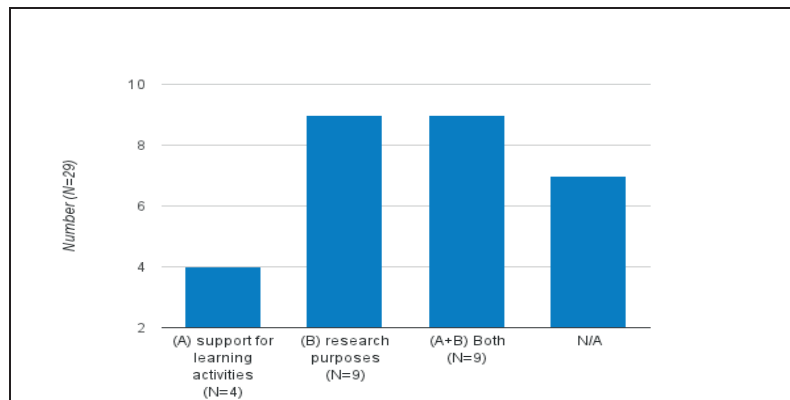


Graph 5: Personal profile

Respondents that didn't register for a personal profile justified their answer in the following two categories: (1) lack of use and (2) ignorance; "I don't use *B-on* very often", or "I use *B-on* occasionally and it doesn't justify the opening of a profile" were inserted into category one (lack of use); "I don't understand what the advantages are", "I don't think I need one", "I don't know how to do it", "I had never thought about it", "I save everything in my PC" or "I don't feel at ease with this technology" belong to category two (ignorance). Crossing data with the regularity of use, and although some of those who use *B-on* more often didn't create a profile (N=5 for daily and weekly use answered No, from a total of 12) these answers can be interpreted as showing that those who don't use very often the search platform don't feel the need of exploring it more for, for instance, purposes of saving searches for further use within the platform (N=11 for those who use *B-on* Occasionally or Monthly, from a total of 17); a lack of experience with scientific databases that are being now explored for the first time is another possible explanation.

The respondents included in category two also said that they would ask for instructions at the library, which means that they rely on the librarians to help with their search difficulties.

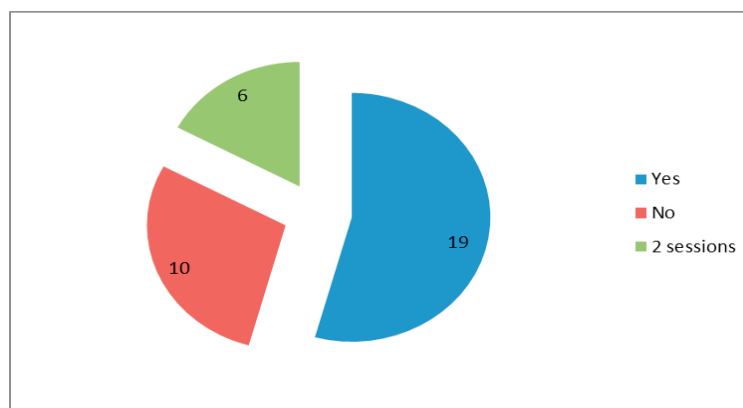
The survey also intended to understand for what purposes the respondents use the resources retrieved from *B-on*. The data shown in Graph 6 demonstrates that scientific resources are mostly used as research sources (N=9), but also for the preparation and teaching of classes (N=4) and, in a significant dimension, for both objectives (N=9). Seven (N=7) of the respondents didn't answer to this question, having five of them justified with the lack of interest of the platform resources for their area of knowledge.



Graph 6: Use of the resources

Crossing these findings with research interests, it is verifiable that the less satisfied responders are those from the areas of Law and Finances, who use other databases for their work, which are not included in *B-on*, such as Heinonline, JStor and national databases regarding jurisprudence and national legal matters, for the first, and ProQuest and SARI (national) for the second. From these, the university subscribes two national databases, respectively BDJUR and SARI.

Finally, it was intended to know whether respondents had participated in any of the Information Literacy sessions provided by the university library. Results show that nineteen (N=19) of them participated in those training sessions, with six (N=6) having assisted to more than one session, as can be seen in Graph 7:



Graph 7: Assistance to Information Literacy training sessions

There appears to be a direct relationship with the assistance to training sessions and the regularity and intensity of use of the platform, while the results also show that respondents within the Law Studies area, although attending to the training sessions and having regular search practices, can't find the contents they need within *B-on*.

5. Conclusion

B-on, as a major database's and scientific research service's platform, is a new reality in Portucalense University. During the first year of subscription almost 5.500 requests were made, mainly from individuals whose research interests rest on the area of Psychology. It appeared as an innovation on the research practices of the university members, as shown by the initial enthusiasm that led to a great number of requests during the first months, aided by the assistance to its first information literacy training sessions. As an innovation, not all teachers and researchers have yet become aware of its importance, or even existence, but those who did have started to integrate it in their habits and practices, both for learning and research activities. Some of the university members don't seem to find in the platform the kind of resources they need, and this applies mainly to those whose research interests lie on Law and Economic Studies, areas where the platform is not so strong, mainly when referred to national publications.

This study brought up to light three main evidences:

Evidence 1: the use of *B-on* is not yet sufficiently widespread within the faculty members, but satisfies those who use it and must be more divulged; The spread implies more publicity and more training sessions, not only deepening but introductory;

Evidence 2: not all areas taught and researched at the university are duly covered by *B-on*: Law Studies, but also the area of Economics/Finance don't find in *B-on* a satisfactory response to their specific needs. The solution to this lack of resources must be found by the managers of *B-on*, but meanwhile obliges the university to subscribe specialized databases, so that the needs for learning and researching in these fields are granted.

Evidence 3: university members rely on the university library and its librarians to help them with their research problems; still, the library needs to offer the researchers more information literacy training sessions and other types of support.

Evidence 4: further research is needed to deepen the findings of this first survey, as well as a continued monitoring of the statistical reports provided by the database; another survey should be applied by the beginning of the academic year of 2014/2015, with questions leading to a qualitative analysis of the results.

As an evidence-based research applied for the purposes of decision making, this is the first step of a continued process, intending to improve the research and learning process at Portucalense University and insure an effective return of the investment implied in the subscription of a major platform like *B-on*. The search for good practices as a way of increasing the use of the platform and the development of more Information Literacy sessions will be the next step, as well as the continued analysis and evaluation of the use of the tool, namely to understand the real impact of the platform in the research and learning practices of the university members; that includes students, who were not inquired through this survey. The alert provided by the less satisfied researchers with the platform contents must as well be considered by attempts of influencing the policies of *B-on* consortium managers and, meanwhile, by continuing to subscribe smaller databases on those less contemplated contents.

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