



Mediation of archival information through the Web

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Recibido: 8 de noviembre de 2022/ Aceptado: 28 de octubre de 2023

Resumen. This article aims to contribute to an analysis of the level of the Websites of the Portuguese District Archives and equivalent (ADs), an assessment based on the perspectives of users and archive professionals, namely on aspects of the functionality, accessibility and interaction of these websites, thus rectifying an existing gap in the literature on this subject. For this purpose, the Quadripolar Method was adopted, complemented by criteria based on two central references: CONARQ and DLGAB. The process began with a review of the existing literature on Web mediation in about 24 ADs and equivalent in Portugal (Aveiro, Beja, Braga and University of Minho, Bragança, Castelo Branco, University of Coimbra, Guarda, Alfredo Pimenta – Guimarães, Évora, Leiria, Lisbon, Portalegre, Porto, Santarém, Setúbal, Viana do Castelo, Vila Real, Viseu, Madeira, Angra do Heroísmo, Ponta Delgada, Horta, Torre Tombo) and a methodology of action was implemented consisting of online surveys sent to 595 users. The objective of this study was to diagnose the level of interactivity of ADs based on the perceptions of the users surveyed, in order to know to what extent the Internet brings new potentialities in the mediation of ADs' information.

Palabras clave: District Archives; Mediation; Web; Users; Information Science

[es] Mediación de la información de archivos a través de la web

Abstract. Este artículo pretende contribuir a un análisis del nivel de las páginas web de los Archivos de Distrito (AD) portugueses, una evaluación basada en las perspectivas de los usuarios y de los profesionales de los archivos, concretamente en los aspectos de la funcionalidad, la accesibilidad y la interacción de estos sitios web, rectificando así una laguna existente en la literatura sobre este tema. Para ello, se adoptó el Método Cuatripartito, complementado con criterios basados en dos referencias centrales: CONARQ y DLGAB. El proceso se inició con una revisión de la literatura existente sobre la mediación web en cerca de 24 EA y equivalentes en Portugal (Aveiro, Beja, Braga y Universidad de Minho, Bragança, Castelo Branco, Universidad de Coimbra, Guarda, Alfredo Pimenta - Guimarães, Évora, Leiria, Lisboa, Portalegre, Oporto, Santarém, Setúbal, Viana do Castelo, Vila Real, Viseu, Madeira, Angra do Heroísmo, Ponta Delgada, Horta, Torre Tombo) y se implementó una metodología de actuación consistente en el envío de encuestas online a 595 usuarios. El objetivo de este estudio fue diagnosticar el nivel de interactividad de los EA a partir de las percepciones de los usuarios encuestados, para saber en qué medida Internet aporta nuevas potencialidades en la mediación de la información de los EA.

Keywords: Archivos de distrito; Mediación; Web; Usuarios; Ciencia de la Información.

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Cómo citar: Lima de Carvalho, M. C. (2023). Mediation of archival information through the Web2, en *Revista General de Información y Documentación* 33 (2), 431-460.

1. Introducción

The Portuguese District Archives and equivalent (ADs) play a fundamental social role in the democratization of the access to information from the National Public Administration. Although the awareness on the importance of the studies on mediation (or mediations) is growing, the fact is that these studies are still incipient, especially the analysis that is the subject of this article: the technological and digital mediation of AD in Portugal, its degree of interactivity and functionality.

In the universe of archives, in particular of the ADs, it is crucial to think not only about the relation that is established between the professional and the user, but, essentially, what instruments, formats and procedures have been adopted in the automation and computerization of documentary information in order to facilitate the citizen's access to it.

Thus, this study is original, as it seeks to diagnose aspects of digital functionality in accessing the administrative documentation of the ADs in Portugal, and, at the same time, to fill in the void of empirically supported studies. It also tries to supply a basis for innovative thinking about the present and the future of ADs and equivalent regarding the *Web* and Information and Communication Technology (ICT), as a whole.

ADs do not escape the influence of ICT (Information and Communication Technology), as one expects them to follow the social and cultural evolution of the necessities of the users. At present, the possibility of conducting remote surveys and collecting information in digital format facilitates the action of the users and broadens the scope of action of AD professionals/managers. In fact, both the archive professionals and the users of archive services come across these changes, which, in turn, change the shape of the organization, aggregation and provision of documentary information. This, consequently, affects the traditional function of the professionals and the process of provision of information to the user.

ICT have been introducing new dimensions to the form of organizing documents, including the scanning of documents, remote access and greater interactivity in the processes, so the agents involved are challenged to implement new systems of classification that adapt to the new requirements, such as meeting the expectations of the users.

Considering this, it was seen as crucial to analyze what the situation of websites of the Portuguese ADs and equivalent is, if these corresponded or not to the requirements, and simultaneously, to know the perceptions of its users, with the general goal of diagnosing and better understanding the forms of access and the use

of the information in the ADs and equivalent, under the scope of Information and Communication Science studies.

For this purpose, a field methodology was implemented, one that consisted of the application of semi-structured surveys to the users. The surveys gathered specific information on the behavior, objectives and understanding that the users present in this scope. Among the collected and analyzed information there is also information on the characterization of the profiles or type of users of the Portuguese ADs.

There were three objectives for this research:

1. Identify and characterize the profile, training, usage and needs of the user of the information found in these systems of information, so as to understand: what information are they looking for? How? Why? How often? What do they do with the information collected;
2. Understand how the use of ICT has changed the uses, access forms, typology of information researched and of the services used, as well as the degree of satisfaction of the users of the ADs in relation to their objectives;
3. Know how the users' informational literacy is emphasized, given that it is viewed as the critical capacity to seek, evaluate, select and use information in various contexts, through mediation.

2. Literatura review

Information Science (IS) is characterized as an area that analyzes the properties, the behavior and flow of information, as well as its processing, in order to perfect its use and accessibility (Gama; Ferneda, 2011). Presently, with the transformations that are happening in the field of new technologies, with major implications in the organization of the information and in the informational behavior, the question of mediation is retaken as central for the IC subject. Particularly, the debate around the District Archives (AD) and equivalent is ever more at this level, undergoing a paradigm transition, which, in the wake of the proposals of the “Escola do Porto”, namely of Silva and Ribeiro (2010b), is defined as post-custodial, informational and scientific. A paradigm that is shaped in opposition to the traditional, custodial, patrimonial, historical and technical paradigm. Under the scope of this post-custodial paradigm, the AD and equivalent are seen not as mere static repositories, but as – and was stated by Silva and Ribeiro (2010b: 8) - “managing units and information broadcasters”. For these authors, the archival documentation has become terminologically an “information resource”, as a result of computerization and automation of the information. These documentary resources also include those “distributed by the Info-sphere or cyberspace”, where the “users with or without a visible face [...] search for information, [...] in a cooperative and social logic, reflected in the much-publicized web 2.0”, and they are willing “to participate in the process of mediation and construction of the metadata (meta-information), through, [...] increased understanding of their less noticeable needs” (Silva; Ribeiro, 2010b: 8).

Under IS, these problems are taken as specificities that derive from the confirmation of an increasingly digital and technological society, since they influence the perception of the systems, services and users of information directly, with special focus on the questions of the mediation in digital support (usability, accessibility and functionality) and on meeting the informational necessities of the users. The practical problems that result from the new digital dynamic being applied to the mediation, namely to the access, organization and representation of the archive information, have come to distinguish a predominant research line. The mediation of the information as an “action of interference carried out by the information professional, directly or indirectly, conscientiously or unconsciously, singularly or plurally, individually or collectively, which fosters the appropriation of information that satisfies, fully or partially, an informational necessity” (Almeida Júnior, 2009: 92-93), now framed in the info-digital plan, necessarily triggers multidisciplinary reflections, to the extent that it is a study which should be intersected with the communicational aspects of the documentary information, the technological instances and new semantic rules deriving from the web protocols (2.0 and 0.3).

Generally speaking, information systems are increasingly sophisticated and documents are available in new digital formats; however, the rhythm of these transformations in the ADs and equivalent in Portugal seems to be slow.

The AD ful fill the main function of protecting the historical, institutional and administrative legacy of a country. They house the documentation that comes from the Civil Registration Office (more than a hundred years old), the Civil Law Notaries (more than 30 years old), the courts (more than 35 years old) and the Central Administration bodies (extinct and ceasing), and, currently, they seem to also include the preservation of documentary archives of families, individuals, businesses, when its cultural and historical meaning contributes directly or indirectly to enhance its importance. These spoils are delivered by legatees, through simple donation or deposit regime protocols, without preventing the loss of any acquired property rights. Therefore, the AD are responsible for the mediation of the documentation of the country’s public service, which is, in turn, carried out by specialized mediators, information professionals and computer experts, technical agents responsible for the creation and *interface* of the digital platforms, through which the information on the funds is made available. Also, they assure that this documentation is accessible to the citizens, through means of research.

Most of these archives are under the "DGLAB - Direção Geral do Livro, dos Arquivos e Bibliotecas", however, some depend on the corresponding Universities (except for the Public Library of Évora).

3. Material and methods

An empirical online collection, based on semi-structured surveys, was carried out online to an effective universe of 592 users of archives. For the implementation of the field survey, one had to consider the users of the ADs who appear in table 1. They are from the ADs dependent on the Universities and on the DGLAB of

Portugal, as well as on other archives with similar functions but that depend on the Autonomous Regions.

Tabla 1. Portuguese district archives.

District Archives		Archives with functions of District Archives	
Dependent on Universities	Dependent on the DGLAB	Dependent on the Autonomous Regions	
Braga/ University of Minho Coimbra/University of Coimbra	Torre do Tombo National Archive Lisbon Porto Aveiro Beja Bragança Castelo Branco Évora Faro Guarda Leiria Portalegre Santarém Setúbal Viana do Castelo Vila Real Viseu	Madeira Angra do Heroísmo Horta Ponta Delgada	Alfredo Pimenta Guimarães

This selection was also done based on the Territorial Units for Statistics of Portugal that assign the statistical sub-regions in which the Portuguese territory is divided (NUTS I, NUTS II, NUTS III), according to the Regulation (EC) No 1059/2003 on the establishment of a common classification of territorial units for statistics (NUTS).

For the collection of data, a survey (annex) was designed from the revision of the following sources: a) the legal standard NP 4438 - 1; 2 that establishes the principle regarding the management of the archive documents, in any format or support, produced or received by any individual or organization, public or private,

in the course of its activities; b) “Inquérito à Satisfação dos Clientes, DGARQ 2011”², the survey prepared by the DGARQ on the situation of the archiving systems in the Central Administration of the State (ACE), which was launched in 2010³, and the survey on the situation of the diocesan archives in Portugal, launched in 2011, under the responsibility of the National Secretariat of the Cultural Goods of the Church (SNBCD)⁴; d) under the scope of the Brazilian Archive Institutions, we considered the general guidelines for the construction of Websites of the CONARQ (Conselho Nacional de Arquivos, 2000).

Regarding the survey sent to the users, initially we asked those in charge of the ADs to send this online survey to all its users. However, it was not possible to do so, since the recommendations on data protection in force in some ADs prevented the provision of the email addresses, but also because, in some ADs, there was no list with users' e-mail addresses. *This limitation was in some way circumvented by putting the address (link) on the web page of the archives and by the physical presence of users in these institutions during the period established for the acceptance of answers.* In order to increase the number of answers, the survey was also distributed to a universe of potential users of these archives. It was sent by e-mail to a set of universities and polytechnic institutes with degrees in the areas of the social and human sciences, assuming that the users of archives are predominantly students and researchers in these areas. The survey was also disclosed to the members of associations in the Academies of History, Genealogy, Arts and members of professional associations from the areas of Archival and Library Sciences, Documentation and Law.

The period to reply was between the months of May and December 2012. Such a large period of time resulted in a high participation rate, especially if one considers the holiday season break typically enforced in many of these institutions. It was possible to obtain the following response rates: there were 884 responses to the online survey, but only 595 were validated, as we only accepted the surveys whose answer to the first question: "Are you or were you a user of the District Archives?" was affirmative (595 affirmative answers).

The data analysis was based on quantitative methods, namely statistical methods: descriptive statistics that involved the collection, presentation and

² This inquiry was developed with the objective of measuring and evaluating the performance of the services directly provided “in loco” to the customers and to assess their degree of satisfaction regarding those organic units, in order to identify priorities of intervention for the improvement of the services currently provided. [Available online]. <URL: [https:// http://dgarq.gov.pt/files/2010/08/Relatorio_Clientes_DGARQ_2009.pdf](https://http://dgarq.gov.pt/files/2010/08/Relatorio_Clientes_DGARQ_2009.pdf)>. [Accessed on April 10 2011].

³ This questionnaire is made up of two parts: Questionnaire I (General Secretariats) and II (Remaining entities). [Available online]. <URL: <https://sites.google.com/site/arquivosace2010/a>>. [Accessed on 28 October 2011].

⁴ This questionnaire had as the objective of knowing the situation of the diocesan archives in Portugal [Available online]. <URL: <https://sites.google.com/site/arqigreja/home>>. [Accessed on 30 October 2011].

characterization of data. The data was made organized in comparative tables and percentual charts created from excel spreadsheets in the functionality “Analysis Toolpack”.

4. Results

4.1. Characterization of the studied population

The sample chosen was comprised of 595 individuals who stated in the pre-selection that they were users of 24 different archives.

The respondents of the survey were 46% male and 54% were female, and the predominant age group was between 26 and 52. With regard to the activity of the respondents, 312 stated that they were workers, corresponding to approximately 53% of the sample collected. The Students and the Working Students represented about a quarter of the respondents. The group of Retired people was less expressive, representing just 16%, and the Unemployed group represented only 5% of the 587 respondents. There were 8 respondents who chose not to answer this question

Among the workers, Historians stood out with 12.4% and Researchers with 15.5%. However, from the 386 respondents to this question, 246 chose the "Other" option, which means that 63.7% of the respondents did not identify with the professions listed and were distributed by other categories, namely: technical assistants, professions linked to education, engineering, civil servants and administrative functions. Among the students, the two largest groups of users of District Archives attended Undergraduate or Master degrees with 46% and 26%, respectively. We would like to emphasize the fact that 17% of the students attended a PhD programme and a small percentage (2%) a Post-Doctorate. There were also 10 Students who chose not to answer this question. Regarding academic qualifications, it may be noted that about one-third (33%) of the users had an Undergraduate degree, followed by Master's degrees (19%) and Post-graduate programmes (13%). Users with PhD titles and Post-Doctorate certificates are a small part of the sample, representing 8% and 1%, respectively. It is still important to note that high school students are represented by 18% of the respondents.

4.2. Use of the District Archives

4.2.1 Most Used District Archive

The most referred Archive was the Archive of Porto District, with 85 responses, followed by the Torr do Tombo National Archive (59 answers), AD of Lisbon (49 answers), AD of Braga and the University of Minho (43 answers) and the AD of Coimbra (37 answers).

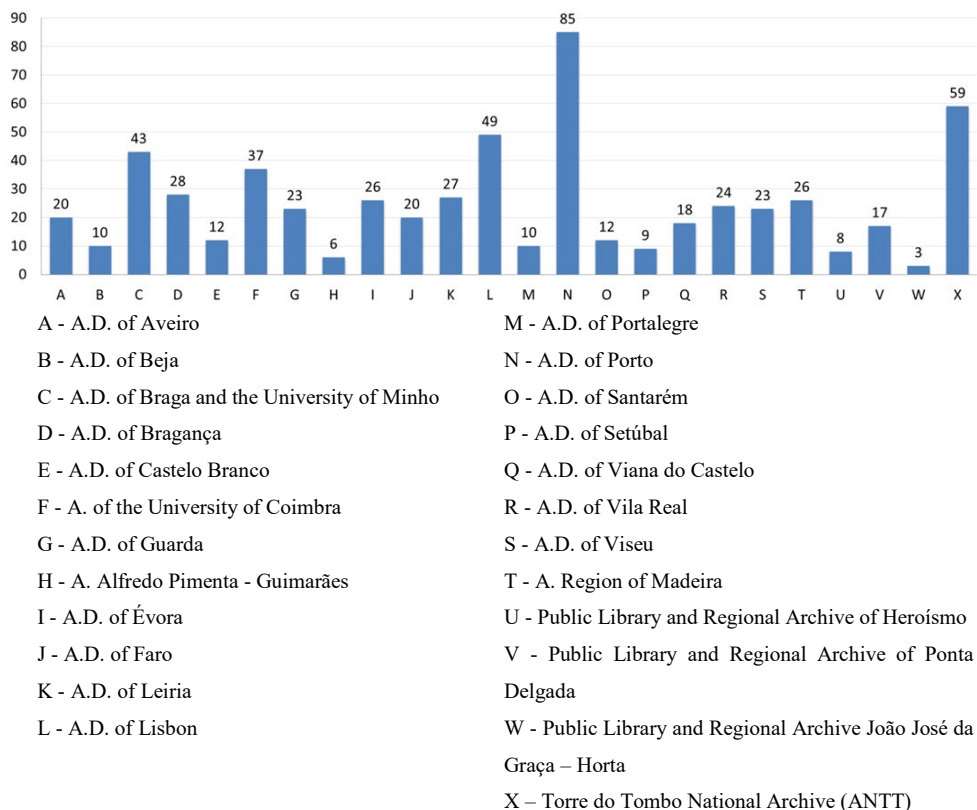


Figure 1. District Archive most sought by the respondents to the survey.

4.2.2. Form of access

The most used form of accessing the information in the ADs stated by 42% of the respondents was physical presence, while 26% accessed them only remotely and 27% stated that they used both forms. Thus, there is still a predominance of physical access. However, we found that in the physical access, the distribution of answers between the individual consultation on research tools (catalogues, inventories, guides) and requesting the help of the archive worker, the distribution is equitable (48 % stated that they did the research themselves and 50% asked for the the help of a professional from the AD). In the category "other", respondents referred "direct research in the parish and notarial books", "web" or "email". Among users who carried out research remotely, the most used form were the online research tools (catalogue/inventory/guide) with 41% of the answers. Then comes email (requesting an answer from an AD worker) as the most frequently used form of access, with 32% of the answers, and the form available on the website, with 20% of results. Finally, among the respondents who chose "Other", there is a predominance for "online research", with an emphasis on scanned funds.

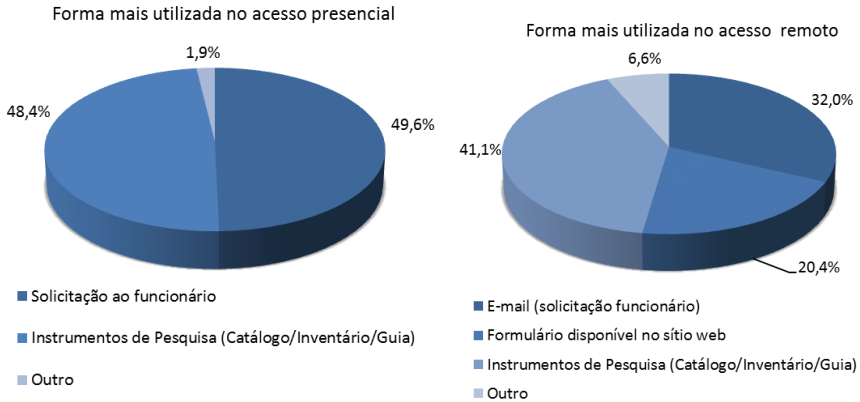


Figure 2. Most used research methods in person and remote accesses.

4.2.3. Frequency of use

It should be noted that those who used the ADs more frequently, that is, between "Almost every day" and "once a month" they did it more often remotely than in person. As for the frequencies between "once every 6 months and once a year", we verified that "In person" was more common. Thus, those who used the ADs sporadically did so almost always in person, while the most frequent users of ADs chose the remote access. We also determined that 16% of the respondents had never used the remote access and 11% never went to an AD for a research in person.

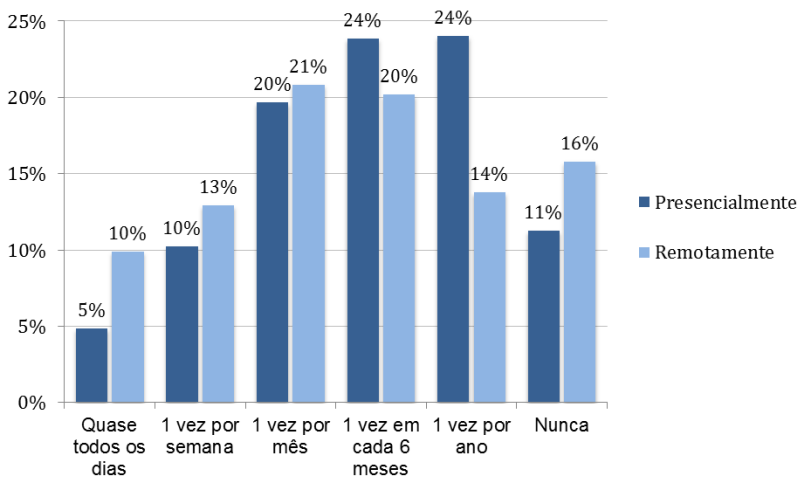
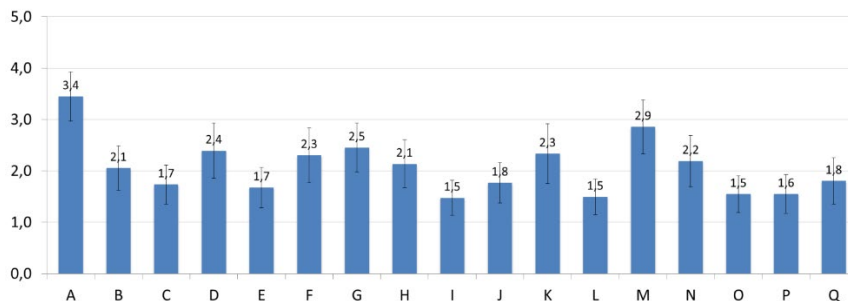


Figure 3. Frequency of use of the AD services in person and remotely.

4.2.4. Most used Access method

Regarding the type of service most used by the respondents, it is clear that the "Online Research" (A) is the most frequent, with an average of 3.4 marks. Then, the choices went for the services of "Reading room" (M) and "Request for reproduction on paper" (G), with an average of 2.9 and 2.5, respectively. In the table below one can see the averages for all the listed services, with the corresponding standard deviations graphically represented (which vary approximately between 1 and 1.5).



Scale: from 1 (never) to 5 (often)

Caption

A - Research on-line

B - Request for certificates on paper

C - Request for certificates in digital format

D - Request for research under the scope of academic work

E - Request for research to fulfil legal purposes

F - Request for research under the scope of the professional activity

G - Request for reproduction on paper

H - Request for reproduction in digital format

I - Request for making study visits

J - Acquisition of publications

K - Elaboration of genealogies (genealogical tree)

L - Request for accompanying didactic/cultural and leisure exhibitions

M - Reading room

N - Reference room

O - Educational Service and Cultural Extension

P - Loan Service

Q - Transcription of documents

Figure 4. Degrees of frequency in the use of the different services in the ADs.

4.2.5. Most valued aspects in the access to information in the ADs

It was possible to determine that the vast majority of the respondents valued the "Quick access to the information" (C) with 74% of answers, the "Easiness in the access to the information through the research tools (Catalogue/Inventory/Guide...)" (A) with 73% and "Available information in electronic support" (B) with 66%. The respondents also mentioned that they valued

“Understandable information” (D) and “Information delivered by the employee” (E), with 35% and 25%, respectively. The option "Other" had 16 respondents, most of them valuing a form of contact with an employee of the AD. As in the previous question, it should be noted that the respondents were allowed to select more than one answer to this question, with these percentages representing the total number of respondents.

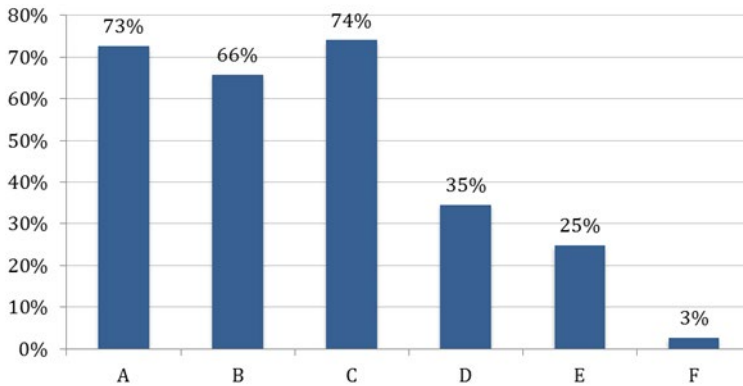


Figure 5. Most valued aspects in the access to information in the ADs.

Caption:

- A - Easy access to the information using the research tools (Catalog/Inventory/Guide...)
- B - Information available in electronic format
- C - Quick access to the information
- D - Understandable information
- E - Information delivered by the employee
- F - Other

4.3. Use of the Ads' funds

4.3.1. Form of knowledge of the funds and/or documents consulted

61% of the respondents stated “Through the research tools on-line” (D) and 58% chose “Through personal contact with employee(s) of the archive” (A). Additionally, 38% stated “Through bibliographical sources” (B), 30% “Through the research tools on paper” (C), 25% “Through other documents consulted in the own archive” (E) and 11% “Through other documents consulted in another archive or in other archives” (F). Of the 6% that answered “Other”, the most frequent answer was “through third parties”. The shown percentages correspond to the total answers to this question, not forgetting that the users could select more than one option.

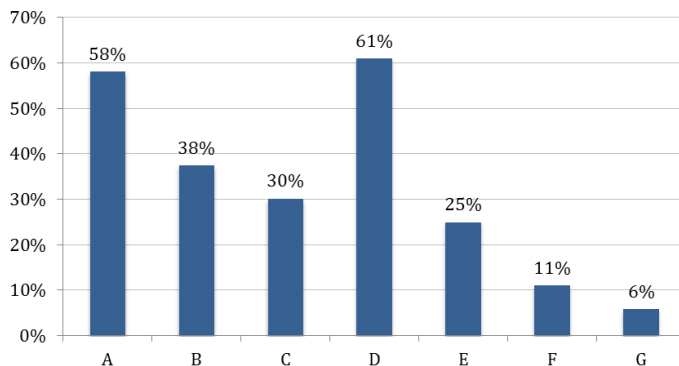


Figure 6. Form of knowledge of the funds and/or documents consulted.

Caption:

- A - Through personal contact with employee(s) of the archive
- B - Through bibliographical sources
- C - Through the research tools on paper
- D - Through the research tools on-line
- E - Through other documents consulted in the own archive
- F - Through other documents consulted in another archive or in other archives
- G - Other

4.3.2. Number of researches done by each user on a certain subject

34% of respondents chose “More than 20”, followed by 31% who picked “From 5 to 20” and 24% “Up to 4”. This distribution shows that some research is necessary for meeting the informational needs of each user.

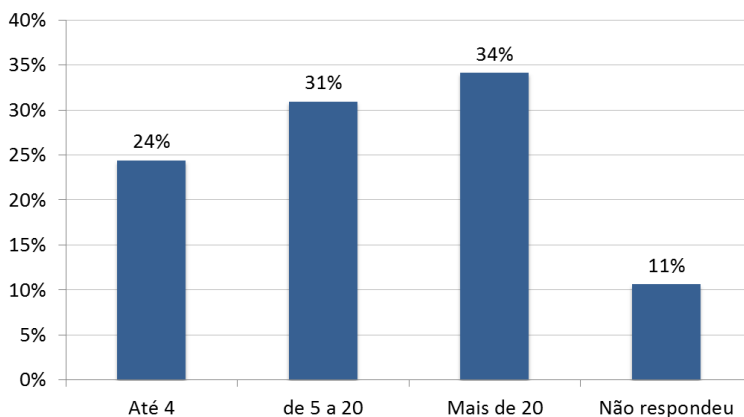


Figure 7. Number of researches done by each user on a certain subject.

4.3.3. Most used research tool in the ADs

Regarding the way users prefer to search the information in the District Archives, the distribution was: 56% preferred to do so "In person" and 44% preferred accessing it "Remotely". If compared with the distribution that the users reported using, one can verify a conformity between the preferred form and the form actually used. We noted that the most used research tool by the users who conduct a research in person is paper (approximately 90% of the respondents used this format, and only 61% used research tools in electronic format). With regard to the users who used research tools remotely, we observed a significant number of respondents that had already used the "Consulta Real em Ambiente Virtual" (CRAV), with this tool being used by about 33% of the total users who access remotely, when this tool is only available in one AD (District Archive of Porto).

4.3.4. CRAV - "Consulta Real em Ambiente Virtual"

Regarding the characterization of the use of "Consulta Real em Ambiente Virtual" (CRAV), a question that was only available for the 123 users who replied they had done it before, whether in person or remotely, the following results were obtained: In the first sub-question "Have you ever requested the issuing of copies/certificates?" (A), 65 respondents answered affirmatively, 51 negatively and only one (1) answered "Don't know". As for the sub-question "Was the research tool intuitive?" (B), there were 74 "Yes" and 30 "No". The number of respondents that answered "Do not know" was 13. When asked "Do you consider that the research tool required several attempts, implying a slower process?" (C), 54 of the respondents said "Yes" and 48 "No". There were also 15 people who said "Do not know". Regarding sub-question (D) "Were the research results using the research tools (Catalogue/Guide/Inventory) enough?", 76 was the number of respondents who said "Yes" and only 30 said "No". It should also be noted that 11 users responded "Do not know". As for option (E) "Did the user have access to the description/summary of the document?" 77 people replied "Yes" and only 27 responded "No", whereas 13 said they did not know. With regard to "After the CRAV consultation, did you need to perform physical document query?" (F) 63 respondents answered no and 43 said yes. There were still 10 people who said they did not know. As for option (G) "Was the research tool prepared on the basis of the general rules of archival description ISAD (G) and ISAAR (CPF)?", the majority of the respondents (61) said they did not know, 45 said yes and only 10 said no. In option (H) "Did the research tool allow the access to digital information without prior consultation of research tools (Catalogue/Guide/Inventory)?" the distribution was 68 "Yes", 29 "No" and 19 "Do not know". As for the last option "Did the way this information is organized and accessible led you to carry out further research?" (I), the vast majority of the respondents said yes, with 90 answers. It should also be mentioned the 16 "No" and 10 "Do not know".

These results highlight the fact that: a large number of respondents mentioned that this tool allowed and led to other researches (sub-question I), that this tool also allowed access to the information without the consultation of the research tools

Catalog, Guide and Inventory (sub-question H), the possibility for users to access a description or summary of the documents (sub-question E), that the results of the search using the research tools Catalog, Guide or Inventory were sufficient (sub-question D), that the research tool is intuitive (sub-question B) and that the CRAV had already been used to issue requests for copies or certificates (sub-question A). In 8 one can see in detail the distribution of the responses regarding the characterization of the use of CRAV.

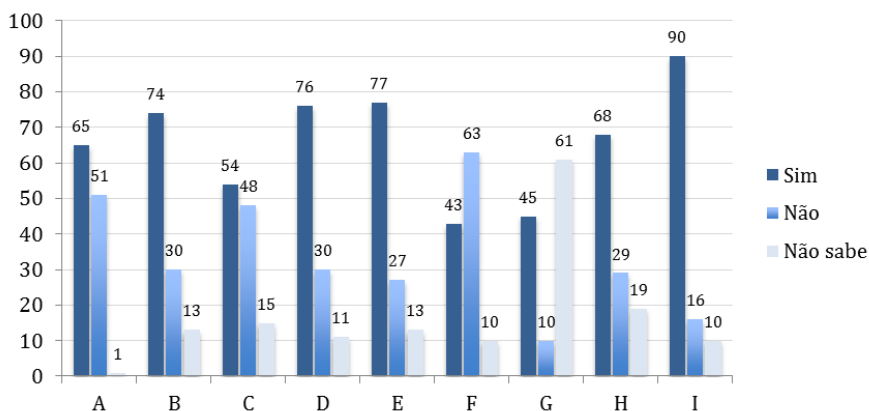


Figure 8. Characterization of the use of "Consulta Real em Ambiente Virtual" (CRAV).

Caption:

A - Have you ever requested the issuing of copies/certificates?

B - Was the research tool intuitive?

C - Do you consider that the research tool required several attempts, implying a slower process?

D - Were the research results using the research tools (Catalogue/Guide/Inventory) enough?

E - Did the user have access to the description/summary of the document?

F - After the CRAV consultation, did you need to perform a physical document query?

G - Was the research tool prepared on the basis of the general rules of archival description ISAD (G) and ISAAR (CPF)?

H - Did the research tool allow the access to digital information without prior consultation of research tools (Catalogue/Guide/Inventory)?

I - Did the way this information is organized and accessible led you to carry out further research?

4.3.5. Classification of the degree of achieving the objectives through CRAV

There was a very positive classification, where mark "4" was given by 27 respondents and mark "5", corresponding to a very positive usefulness, was given by 24 people. Note that only the respondents that had chosen the option "More than 20" in question 28 and "Yes" in the question 33, option (I) "Did the way this information is organized and accessible led you to carry out further research?" could answer this question, with a total of 59 answers.

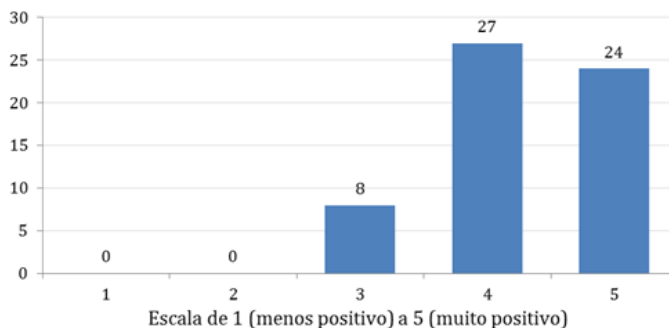


Figure 9. Classification of the degree of achieving the objectives through CRAV.

4.3.6. Characterization of the use of documentary research online

This question was only available for the respondents who had answered the second option in both questions 30 and 31, selecting "Research tools in electronic format". Out of a total of 371 valid answers, the following results were noted: In the first sub-question "Have you ever requested the issuing of copies/certificates?" (A), 176 respondents answered affirmatively, 152 negatively and only nine (9) said they did not know. Concerning the sub-question "Was the research tool intuitive?" (B), there were 221 "Yes" and 70 "No". The amount of respondents who chose "Do not know" amounted to 46. When questioned "Do you consider that the research tool required several attempts, implying a slower process?" (C), 133 of the respondents stated "Yes" and 167 said "No". There were also 37 people that said "Do not know". Regarding the sub-question (D) "Were the research results using the research tools (Catalogue/Guide/Inventory) enough?" 196 was the number of respondents that said "Yes" and 109 said "No". It should also be noted that 32 users answered "Do not know". As for option (E) "Did the user have access to the description/summary of the document?" 201 people replied "Yes", 101 answered "No" and 43 claimed they did not know. Regarding "Was the research instrument sufficient (without consultation of the document)?" (F), 170 respondents answered no and 135 said yes. There were also 31 people who said they did not know. As for option (G), "Was the research tool prepared on the basis of the general rules of archival description ISAD (G) and ISAAR (CPF)?" most respondents (187) said they did not know, 126 said yes and only 21 said no. In option (H) "Did the research tool allow the access to digital information without prior consultation of research tools (Catalogue/Guide/Inventory)?" the distribution was 148 "Yes", 120 "No" and 67 "Do not know". As for the last option "Did the way this information is organized and accessible led you to carry out further research?" (I), the vast majority of the respondents says yes, with 249 replies. Also note the 52 "Nos" and the 35 "Do not know".

From these results, one should highlight the fact that, similarly to question 33 (regarding the CRAV), a high number of respondents referred that the online documentary research allowed and led to other researches (sub-question I), as well

as the possibility of the users to access a description or summary of the documents (sub-question E), of the results of the research that used the research tools Catalogue, Guide or Inventory being sufficient (sub-question D), as well as the fact that this form of research was intuitive (sub-question B). Despite the number of users who answered affirmatively to the research online allowing access to the information without the consultation of the research tools Catalogue, Guide or Inventory (sub-question H) being higher than those who answered negatively, we noted that the relative percentage of “YES” is significantly lower for this sub-question than for the one in the CRAV. In the following Figure one can see in detail the distribution of the answers regarding the characterization of the use of the documentary research online.

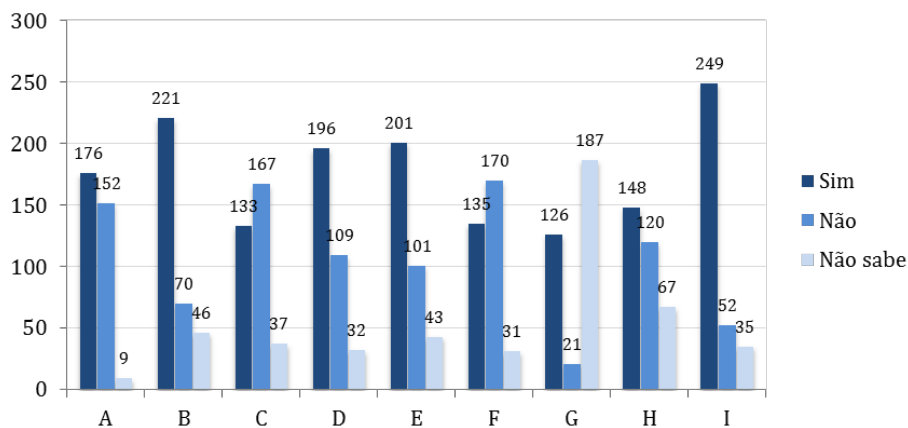


Figure 10. Characterization of the use of online documentary research.

Caption:

A - Have you ever requested the issuing of copies/certificates?

B - Was the research tool intuitive?

C - Do you consider that the research tool required several attempts, implying a slower process?

D - Were the research results using the research tools (Catalogue/Guide/Inventory) enough?

E - Did the user have access to the description/summary of the document?

F - After the CRAV consultation, did you need to do physical document query?

G - Was the research tool prepared on the basis of the general rules of archival description ISAD (G) and ISAAR (CPF)?

H - Did the research tool allow the access to digital information without prior consultation of research tools (Catalogue/Guide/Inventory)?

I - Did the research tool allow the access to digital information without prior consultation of research tools (Catalogue/Guide/Inventory)?

4.3.7. Classification of the degree of achieving objectives through online documentary research

Regarding the classification that the users give for achieving their objectives using tools of online documentary research, a very positive rating was given (as happened with CRAV). Mark "4", as well as mark "5", corresponded to a very positive usefulness, and both were selected by 46 respondents. It should be noted

that this question could only be answered by the respondents who had chosen the option "More than 20" in question 28 and "Yes" in question 35, option (I) "Did the way this information is organized and accessible led you to carry out further research?", for a total of 117 answers.

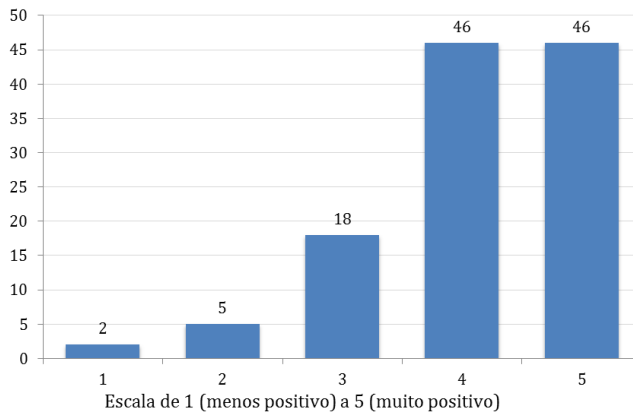


Figure 11. Classification of the degree of achieving the objectives through the online documentary research.

4.4. Use and satisfaction of the users of ADs' web

Here, only 516 of the 595 respondents answered, with 79 (13%) not giving any response. From those, 361 (61%) answered affirmatively and 155 (26%) negatively.

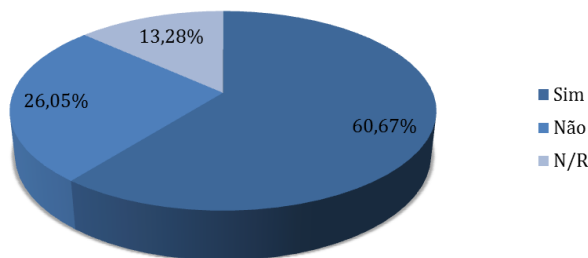


Figure 12 Frequency of usage when accessing the website of the ADs.

4.4.1. Degree of satisfaction with different parameters of the content of the websites of ADs

Of the 361 people surveyed, when asked about "Easiness in finding the information", 12 people were extremely dissatisfied, 47 dissatisfied, 21 indifferent, 191 satisfied and 63 extremely satisfied. Regarding the sub-question "Provision of relevant information", 12 people said they were extremely dissatisfied, 53

dissatisfied, 26 indifferent, 177 satisfied and 60 extremely satisfied. With respect to the sub-question "Easiness in recovering the information required", 12 people were extremely dissatisfied, 50 dissatisfied, 29 indifferent, 179 satisfied and 56 extremely satisfied. When answering the sub-question "Information not treated archivistically ", 27 people stated they were extremely dissatisfied, 76 dissatisfied, 62 indifferent, 88 satisfied and 33 extremely satisfied. As for the sub-question "Possibility of consultation without visiting the services", 29 people were extremely dissatisfied, 51 dissatisfied, 22 indifferent, 133 satisfied and 95 extremely satisfied. These results show a predominance of users satisfied or extremely satisfied with the parameters listed, regarding the content of the ADs' websites, with "Easiness in finding the information" scoring a higher degree of satisfaction, followed by the "Provision of relevant information", the "Easiness in recovering the information required" and the "Possibility of consultation without visiting the services" scoring the highest number of "Extremely Satisfied" answers. As for the parameter "Information not treated archivistically", although the number of answers "Satisfied" and "Extremely Satisfied" are higher than "Dissatisfied" and "Extremely Dissatisfied", it discloses a considerably homogeneous distribution between the different answers, thus becoming apparent that it is the one for which the general satisfaction of the users is lower.

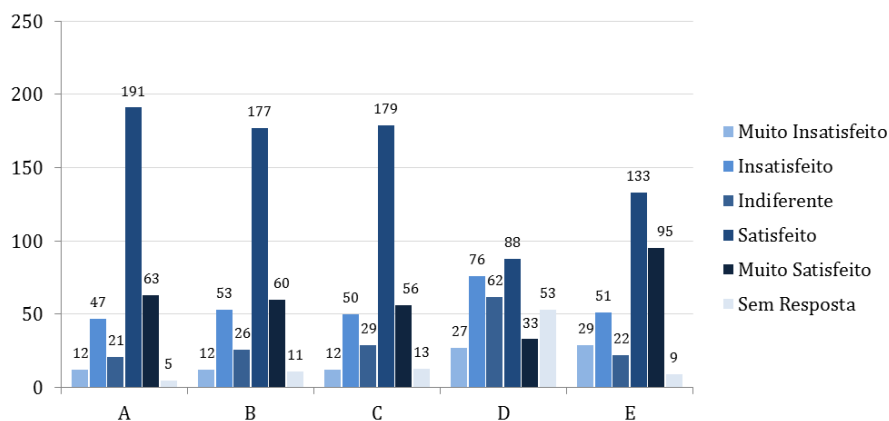


Figure 13. Degree of satisfaction with different parameters of the content of the ADs' websites.

Caption:

A - Easiness in finding the information

B - Provision of relevant information

C - Easiness in recovering the information required

D - Information not treated archivistically

E - Possibility of consultation without visiting the services

4.4.2. Degree of satisfaction concerning the requests made through the websites of the ADs

As for the degree of satisfaction concerning the requests made through the websites of the ADs, this question could only be answered in case there was an affirmative reply to question 39 (as had happened with the previous question in the survey). We got a total of 361 answers. With respect to the first sub-question (A) “Easiness in understanding and filling in the forms”, 8 people were extremely dissatisfied, 30 dissatisfied, 29 indifferent, 171 satisfied and 66 extremely satisfied. There were also 35 people that did not answer. Regarding the sub-question (B) “Easiness in obtaining copies in digital format”, 12 people said they were extremely dissatisfied, 29 dissatisfied, 43 indifferent, 131 satisfied and 62 extremely satisfied. There were also 62 people that did not answer. Considering the sub-question (C) “Speed of response to the first request”, 13 people were extremely dissatisfied, 31 dissatisfied, 27 indifferent, 147 satisfied and 80 extremely satisfied. There were 41 people that did not answer. As for the sub-question (D) “Timeliness of the information requested”, 10 people were extremely dissatisfied, 31 dissatisfied, 25 indifferent, 156 satisfied and 81 extremely satisfied. There were 36 people that did not answer. In what concerns the last sub-question (E) “Accuracy and usefulness of the given information”, 6 said they were very dissatisfied, 20 dissatisfied, 25 indifferent, 159 satisfied and 94 extremely satisfied. There were 35 people that did not answer. From these results, we may emphasize the predominance of satisfied or extremely satisfied users in all the parameters listed for the requests made through the websites. As a matter of fact, we can see that the sum of the "Extremely Dissatisfied" and "Dissatisfied" is always between 10% and 19% of the sum of the "Extremely Satisfied" and "Satisfied". Although the degree of satisfaction regarding the “Speed of response to the first request” (C) has more answers of "Satisfied" and “Extremely Satisfied” users, it is this parameter whose percentage of "Extremely Dissatisfied" and “Dissatisfied” is higher (19%), comparatively to the answers “Extremely satisfied” and “Satisfied”.

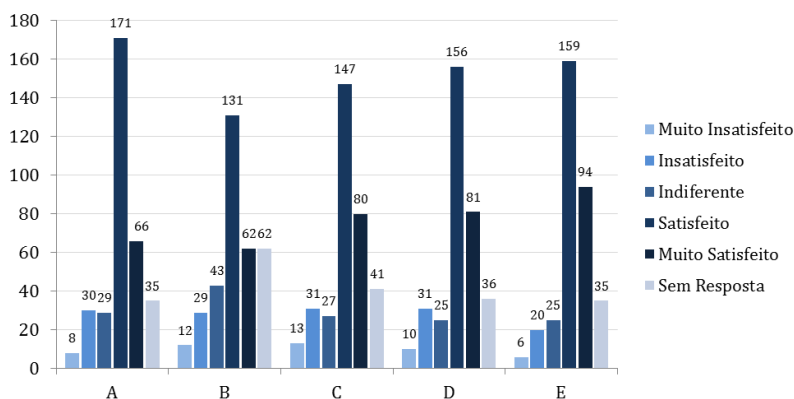


Figure 14. Degree of satisfaction concerning requests made through the website of the Ads.

Caption:

- A - Easiness in understanding and fulfilling the forms
- B - Easiness in obtaining copies in digital format
- C - Speed of response to the first request
- D - Timeliness of the information requested
- E - Fastness in getting the information requested

5. Discussion and conclusion

This descriptive analysis allowed for a characterization and getting relevant information on the Ads, namely the profile, interests, preferences, degree of satisfaction and use of funds, access tools, services, ICTs, etc., on the part of the users. We described the results obtained concerning their profile, the forms of management, the position and opinion towards the changes brought about by the ICTs on the services, support transfers, provision of information to the users and characterization of their informational behavior, the perception of their needs, expectations, difficulties and degrees of satisfaction, including reviews and measures suggested by those responsible for improvement and adaptation of the mediation practiced in the ADs to the new challenges they face, in the light of the new post-custodial and informational paradigm.

Thus, we will now put forward the results and corresponding analysis according to the structure mentioned above:

From the descriptive analysis presented previously, we can verify that the different ADs do not all collect the same type of data on their users and that the data they collect have more to do with control and answer needs for the requests, which are not uniform among ADs, and it is not possible for the ADs, with this information, to trace and characterize the users' profiles. Thus, for such a characterization it is necessary to carry out specific surveys on the users of the ADs, such as the one we carried out under the scope of this paper. There are also other studies, but usually more focused on the assessment of the degree of satisfaction of the ADs' users, as the "Inquérito à satisfação dos clientes DGLAB 2011". However, as they use that same approach, they also end up not collecting information on the usage and needs of the users.

About the results from this survey, which were previously described, we can point out and draw a typical profile of users: they are almost evenly distributed between male (slightly above) and female, they are between 26 and 52 years old, they are not members of associations of archivists, librarians or documentarists, they hold mainly Masters and Undergraduate degrees, they are workers or working students, and often they have the following professions: historians, genealogists, researchers and teachers, educational professionals, engineers, civil servants and administrative staff. This user's characterization we did from the data of our survey is in line with the results presented in the "Inquérito à satisfação dos clientes DGLAB 2011" (Directorate-General for Books, Archives and Libraries, 2011) that, focusing on the 17 Archives under its authority (including in addition to ADs, the Portuguese Centre of Photography) presented as results on the characterization of users the following: 65% of males and 38% of females; more frequent age group

between 33 and 42, with the most frequent academic degree being the Undergraduate degree (followed by upper secondary education).

On the preferential form of access, the surveys disclosed a predominance of face-to-face access (42% accessed the information only in person, while just 26% accede exclusively remotely). However, there was a significant percentage of users that said they used both access forms (27%). When questioned on the preferential form of research the distribution was practically on the same level, despite a slightly higher frequency in the face-to-face access (56%), comparatively to remote access (44%). When comparing these results with those in the referred study of the DGLAB of 2011, we verified that the distribution between the face-to-face access and remote access is equally almost on the same level, though the study of the DGLAB refers an inverse distribution (42% of face-to-face access and 58% of remote access). It should be pointed out that the universe of ADs included in the study of the DGLAB, is less extensive than our research (17 archives in the study of DGLAB and 23 in this paper).

Regarding the frequency with which users access ADs, in presence or remotely, we verified that the users who use the ADs with bigger frequency do it more often remotely than face-to-face. As for the ones that resort with less frequency to the ADs (maximum 2 times per year), we noted that face-to-face access is more frequent.

The introduction of ICT naturally changed the way users access information in the Ads. One of the main changes was the possibility to access information remotely, either from the sites of the ADs or from databases to search online documentation made available by them (mainly DigitArq and the CRAV), as well as by the introduction of email as a privileged form of contact from a distance, substantially reducing requests by CTT, as well as telephone contacts.

The possibility of remote access allows many users to resort to the services of the ADs without having to travel physically. Nevertheless, it did not affect the importance or preference for face-to-face access in many situations (we observe currently a near parity between "remote" and "face-to-face" users), but it definitely contributed to the increasing knowledge on funds and services shown by users that chose to physically visit ADs. Still on remote access, we noticed that most users referred using it to access research tools, thus revealing that this new possibility, introduced by the advancement of ICTs, constitutes a change in the form of access to information, replacing the on paper format of research tools for the digital format. This change also occurs in the face-to-face access, where the access via research tools is carried out using both paper and electronic media.

This new form of reasearch tools usage and their frequency or relative distribution has also been referred to in the report of the DGLAB of 2011, with the same characteristics.

Further on the impact of ICTs on ADs, we should like to point out the possibilities created by remote access, not only in terms of research of information, but also of requesting services online, such as issuing certificates, photocopies, etc.

Another change introduced by ICTs has to do with the introduction of digital format for documents, whose existence (or not), depending on the policies of

format transfer (specially in terms of scanning), ends up having some influence on the information search. As a matter of fact, there are already a series of databases that make it possible to view scanned documents, which, due to the ease of remotely accessing the document itself, have potentially more visibility.

About the impact of ICTs on the degree of satisfaction of the users concerning their objectives: it is understood that all the changes that they simplified and made more effective and efficient, in terms of research and information access, were understandably well received by the users. Given that the introduction of ICTs in the ADs is a gradual process and that it accompanies (in some cases eventually with some delay) the introduction of ICTs in the daily lives of people, the resulting changes were being received and perceived as a natural sign of the "gradual evolution of time", which means we may not make a direct comparison between the degree of the users' satisfaction before and after of the introduction of ICTs. Still, it is possible to assess the current degree of satisfaction of these users with the new digital research tools, as well as with respect to the content and the possibility to perform service requests through the websites of the ADs, possibilities that currently only exist because of ICTs.

Thus, it was possible to observe in the answers to the surveys, that the degree of achievement of their objectives was classified globally as very positive, both concerning the use of CRAV (database for "Consulta Real em Ambiente Virtual"), with an average score of 4.3 in a scale of 0 to 5, and the documentary researches online (DigitArq), with an average of 4.1. Equally, the degree of satisfaction of the users, both regarding the content and the requests for services in the ADs via the website, was globally high, with the vast majority of answers being "satisfied" and "extremely satisfied".

These results point in the same direction of those obtained in the survey of the DGLAB 2011, which referred a level of satisfaction with the documentary research tools "with tools via electronic means of 3.53 (70.64%)", also mentioning that "the bottom line is, the average level of satisfaction perceived by our customers regarding the quality of the websites of the net DGARQ is sufficiently positive, amounting to 80% (3.99, in the Likert scale of 1 to 5)."

Traditionally, the units of information were concentrated in the needs area, revealed when a book was requested for library loan, then a document was consulted in the reference section, a search was carried out in the database, which then requested the necessary document. The references used in the research tasks were also considered. The information collected favored sociological and demographic characteristics of the groups to which the users belonged. But, it is with the work of Wilson (1981), Durbin (1983), Ellis (1989) or Kuhlthau (1991), among others, that the studies were moved towards a user perspective, as far as information needs were concerned (González Teruel, 2005). It is, therefore, in this perspective that the paradigm was developed. With this information it is possible to elaborate studies on users, and, in particular, to emphasise the importance that these results have on the development of information systems.

In order to meet their informational needs, the users search the internet more and more, as well as aggregating and inter-dynamic ontological digital systems, to

enable a more diverse, remote and intuitive access to information. However, we are experiencing in Portugal a transitional phase and the search systems are still little intuitive. Also, the users still feel the need for assistance from the person in charge of the archive, or they may need to perform several searches until they find what they are looking for. Nonetheless, the remote search mode has instigated a higher research frequency in the AD. People understood that users make it possible to better grasp the needs for technological updates in the ADs, so that the research tools and the research become more functional and intuitive. In this context, the studies in IS must provide a thorough knowledge of the users' needs, as this is the only way to consolidate the post-custodial paradigm. Change is imminent. The conventional physical structures (buildings, staff, equipment, informational archive, etc.), custodians of the documentation, are being substituted by an informational and communicational vision, which is embodied in computer systems that convey a greater and easier access, in mechanisms of optimization for the experience of database queries (both in person and remotely).

In summary, this study has shown that in the analyzed ADs the impact of the project CRAV - "*Consulta Real em Ambiente Virtual*", of the District Archive of Porto and the Institute of the National Archives/Torre do Tombo (IAN/TT), initiated in April 2006 stands out on the perception of the users. It continued on projects previously initiated by the AD of Porto (DigitArq), with the vision of "updating" the relationship of the archive with its users, by exploring the possibilities that technologies offer and aiming to meet the expectations of the "market" (Carvalho, 2014).

CRAV appears as a pioneer, because it allowed the integration of knowledge in society and the use of the current technological and organizational instruments, duly customized and adjusted to the cultural institutions and to the goods that they guard and provide, aiming at a public service of quality and closer to the citizens (Sousa et. al, 2007, pp. 1-7). This service is constituted by a web interface aimed at research and remote reading and at the supply of copies of the archived documents (room of virtual reference). The next objective is to extend this concept to all the other national archives, so that they all provide the following remote features to the user, namely: (i) To request, to pay for and to receive digital reproductions ; (ii) To get budgets for reproductions; (iii) To search documents; (iv) To book documents that will be read in the reading room; (v) To book a place in the reading room; (vi) To request and to receive documents digitally certified; (vi) To get information through interactive channels.

In the universe of the AD that were object of this study, this, in particular, was counted as the most searched for and the one with the highest number of users.

In Portugal, and in the scope of the archives studied, we must mention the DigitArq software that emerged, in 2003/4, in the AD Porto as the guarantee of a global management of the documentation of an archive, based on international standards for description.

The DigitArq is based on three international standards: ISAD(G) - International Standard Archival Description; EAD - *Encoded Archival Description*; and OAI-PMH - *Open Archives Initiative Protocol for Metadata Harvesting*, being that the

first two are intended to support the description process and the third to allow the interoperability with other content aggregating portals. It is constituted by four functional modules that allow for the optimization of information management, treatment and publication.

In 2004, also in the AD of Porto, another modernization project, named CRAV - "Consulta Real em Ambiente Virtual", was started. Its objective was to meet the needs for the implementation of remote and local supply, of digital document reproductions (certified in digital/electronic environments). Thus, it takes care of the institution's interactive relation with the citizens, using technologies and processes already available but not yet in use in various cultural institutions.

Considering that the archive documents, kept in this archive and integral part of the Portuguese cultural heritage, also possess probative and legal value, it is essential to guarantee that the supplied reproductions possess the following characteristics: authenticity, integrity, non repudiation and confidentiality of the data. These new features were only possible because of the publication of the legal texts that govern the certification/digital signature and the electronic transmission of documents with legal value. The user can thus have 24/7 access to the documents and to the majority of the services provided by the Archive and to the new features that the use of the ICT makes possible (Lima et al., 2004).

Another important benefit, the emergence of the ICT brought the possibility to promote the appropriation of the organic information in the permanent Archives through virtual access, so there will be a necessity to convert the description standards, so that they are translated by computers and, in the same way, to consider the mediation of information in digital environments (Gama, Ferneda, 2011).

On the other hand, in the perspective of Jardim and Fonseca (2004): "In the archival field, the memory exerts a centrality that leads, with frequency, to identify the archives as memory places. However, the memory in the archival space is only activated if such memory places are also managed as places of information, where this is not only organized, but also transferred". (Jardim; Fonseca, 2004: 7). It is as information places - spaces (sometimes virtual) characterized by the informational flow - that the archives (in any one of the phases of the life cycle) redefine its political and social dimension (Garden, 1999). For these authors, the paradigm change will only occur if one considers the Archives as information services, that is to say, services guided for the users, more worried about the structuring and operationalization of a praxis in accordance with the necessities and uses of the information by the users, and less about the reflection around the improvement of the methods and instruments of archival description.

In our view, which arises from the research carried out in Portugal, particularly in the Escola do Porto, this paradigm change can only be materialized when the Archive professionals prove to have qualified knowledge (Silva; Ribeiro, 2004) that allows them, for example, to articulate equitably the needs of the Archive with the needs of the users.

Therefore, it is essential that the training of these professionals, traditionally based on a static document notion, incorporates the principles of the Information

Science, that is to say, moving quickly away from the technicist paradigm developed around the practice and "know-how", and it concentrates on the in-depth study of the informational and communicational phenomenon in its multiple and vast aspects.

It is important therefore to understand if the legal provisions and the technicist normalization involved in the access to the information contained in the District Archives restrains the mediation of the practiced information, and/or if the perceptions of the information professionals and the users on this type of restrictions somehow influences the mediation that occurs there.

The core of this issue is the question of accessibility, that is, the question of knowing if the District Archives fulfill, preferably or not, the social function underlying them, truly assuming its statute of "(...) social institutions responsible for the accomplishment and promotion of informational practices, social and political and epistemological requirement that these are more and more fair, democratic and accessible - understanding informational practices as social, cultural and educational practices of treatment, organization and communication of the information, as production, transference, diffusion/dissemination, storage, recovery and use of the information" (Costa; Silva; Ramalho, 2010: 130).

From the argument of Jardim and Fonseca (2004), it is possible to question the access to archival information in six underlying assumptions:

- 1) The concept of "place" becomes secondary for the information professional and for the users;
- 2) The most important is not where the information is, but access to the information;
- 3) The emphasis on the information management shifts from the collection to the access, from the stock to the flow of information, from the systems to the networks;
- 4) Institutions as archives, libraries and centers of documentation acquire new vocations, renew functions that are historical to them and surpass others;
- 5) Under the trivialization of the information technologies, the users create new demands for the archives, libraries, centers of documentation and cause the reallocation or suppression of borders that mark such spaces;
- 6) Virtual informational spaces emerge (libraries, archives, etc.), whose existence, far from excluding the traditional documentary institutions, give them new possibilities of information management.

For these authors, the increasing use of ICT has led to the redefinition of the models of organization and structuring of the information services, such as the Archives: "(...) not only do we need to move towards a paradigm of post-custodial archival, but also move from the model "archives targeted for the archivists" to "archives targeted for the users". It is increasingly clear that archivists do not serve the archives, but the society and its various agents" (Jardim; Fonseca, 2004: 1).

This means that, in the context of the Archives, it became absolutely necessary to consider the central role of the users and the impact of the information on their lives, gradually guiding the work of the information professionals to the needs of the users. In other words, and namely in the archives field, it seems a priority to research the variables that affect the information needs of users, such as the range of available sources of information, the uses for which the information will be necessary, the professional background, the motivation and other individual characteristics of the user, the social, political, economic, legal environment and the regulatory systems that involve the user, and the consequences of the use of the information (Jardim; Fonseca, 2004).

It is imperative that the information professional frees him/herself from the perception s/he has of the user, based on its degree of satisfaction with the service, and focuses all his/her efforts on the design and organization of the system, in the light of the possible needs and demands of its potential users. In other words, from the perspective of the informational behavior of the users (understood as the totality of human behavior regarding the sources and means of information and also the use of the information) and the mediation of information practiced.

5. References

- Almeida Junior OF (2009). Mediação da informação e múltiplas linguagens. [Mediation of information and multiple languages]. *Pesq. bras. Ci. Inf.*, Brasília, v. 2, n. 1, p. 89-103, jan./dez. https://www.researchgate.net/publication/277162051_MEDIACAO_DA_INFO_RMACAO_E_MULTIPLAS_LINGUAGENS Accessed 17 Nov. 2013
- Carvalho, M (2014). Estudo da mediação e do uso da informação nos arquivos distritais. [Study of mediation and use of information in the district archives]. PhD Thesis, FLUC <http://hdl.handle.net/10316/25994> Accessed 22 March. 2017
- Conselho Nacional de Arquivos (2000). Diretrizes Gerais para a Construção de Websites de Instituições Arquivísticas. [General Guidelines for the Construction of Archival Institution Websites]. Rio de Janeiro: Conarq. http://conarq.arquivonacional.gov.br/images/publicacoes_textos/Diretrizes_Construcao_websites.pdf Accessed 12 Nov. 2013
- Decreto-Lei nº 149/83 (1983). Regime jurídico dos Arquivos Distritais e das Bibliotecas Públicas, de 5 de Abril. [Legal regime of the District Archives and Public Libraries, April 5]. https://www.uc.pt/auic/instituicao/DL_149-83 Accessed 17 Dec. 2013
- Dervin, B (1983). An overview of Sense-Making research: concepts, methods, and results to date. Presented at the Annual Meeting of the International Communication Association, Dallas, TX <http://faculty.washington.edu/wpratt/MEBI598/Methods/An%20Overview%20of%20Sense-Making%20Research%201983a.htm>. Accessed 12 April. 2013
- DGARQ (2011) Inquérito à Satisfação dos Clientes. [Customer Satisfaction Survey]. Accessed 23 Nov. 2013 at http://arquivos.dglab.gov.pt/wp-content/uploads/sites/16/2014/04/Relatorio_Clientes_DGARQ_2009_oldV.pdf
- Ellis, D (1989) A behavioural approach to information retrieval system design. *Journal of Documentation*, 45(3), 171–212. https://www.emeraldinsight.com/doi/abs/10.1108/eb026843_Accessed 12 Nov. 2013

- Gama, F. A., Ferneda, E (2011). A mediação da informação nos arquivos permanentes: serviços de referência arquivística no ambiente digital. *Informação & Informação*, 15, 148–169 doi.org/10.5433/1981-8920.2010v15n2
- González-Teruel, A (2005). Los estudios de necesidades y usos de la informacion: fundamentos y perspectivas actuales. [Studies of needs and uses of information: current fundamentals and perspectives]. Ediciones Trea, Gijón
- Jardim, J. M (1999). O acesso à informação arquivística no Brasil : problemas de acessibilidade e disseminação. [Access to archival information in Brazil: problems of accessibility and dissemination]. Documento preparatório Mesa Redonda Nacional de Arquivos, Conselho Nacional de Arquivos (CONARQ), Rio de Janeiro, 13 a 15 de Julho de 1999. <https://arquivoememoria.files.wordpress.com/2009/05/informacao-arquivistica-no-brasil.pdf>. Accessed 12 March. 2013
- Jardim, J. M., Fonseca MO (2004). Estudos de usuários em arquivos: em busca de um estado da arte. *DataGramaZero - Revista de Ciencia da Informacao*, 5(5), ARTIGO 04 <http://www.brapci.inf.br/index.php/article/view/0000002049/48e977b457db5029a0b0cd9a813f1865>.
- Kuhlthau, C. C (1991). Inside the search process: Information seeking from the user's perspective. *Journal of the American Society for Information Science*, 42(5), 361–371. <https://onlinelibrary.wiley.com/doi/abs/10.1002/%28SICI%2910974571%28199106%2942%3A5%3C361%3A%3AAID-ASI6%3E3.0.CO%3B2-%23>.
- Lima, M. J. P., Barbedo F, Sousa A, Lacerda S (2004). Arquivo digital: gestão e serviços ao utilizador. [Digital archive: management and user services]. In: *Actas do Congresso Nacional de Bibliotecários, Arquivistas e Documentalistas*, n.º 8 (2004): Nas encruzilhadas da informação e da cultura : (re)inventar a profissão Estoril, 12, 13 e 14 de Maio de 2004. <http://www.apbad.pt/Edicoes/EdicoesCongresso8.htm>
- NP 4438-1 (2005). Informação e Documentação: Gestão de documentos de Arquivo. [Information and Documentation: Archival Document Management]. IPQ, Lisboa
- Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS) (2003). Official Journal of the European Union, L 154, 1-41. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:32003R1059>.
- Silva, A. M., Ribeiro, F (2010). Recursos de Informação. Serviços e Utilizadores. [Information Resources. Services and Users]. Universidade Aberta, Lisboa
- Silva, A. M., Ribeiro, F. (2004). Formação, perfil e competências do profissional da Informação. [Training, profile and skills of Information Professional]. *Actas do Congresso Nacional de Bibliotecários, Arquivistas e Documentalistas*, n.º 8: Nas encruzilhadas da informação e da cultura : (re)inventar a profissão. Estoril <https://www.bad.pt/publicacoes/index.php/congressosbad/article/view/622>
- Sousa, A; Ramalho, J. C., Ferros, L.M., Lima, M. J. P (2007). Consulta Real em Ambiente Virtual: implementação de uma sala de referência e leitura virtual num arquivo. [Virtual Consultation in Virtual Environment: implementation of a reference room and virtual reading in a Archive]. *Atas do Congresso Nacional de Bibliotecários, Arquivistas e Documentalistas*, n. 9, pp. 1. <https://www.bad.pt/publicacoes/index.php/congressosbad/article/view/557>.
- Wilson T (1981) On user studies and information needs. *Journal of Documentation*, 37(1), 3–15 doi.org/10.1108/eb026702

Annex 3: Survey on the use and satisfaction of the ADs' users

A. Characterization of the population studied		<ul style="list-style-type: none"> - There was a near parity regarding gender (46% males and 54% females) and the predominant age group was between 26 and 52-
B. Diversity of the forms of access.	Q1: The form of access to information on the cultural activities taking place in the District Archives.	<ul style="list-style-type: none"> - "Online research tools" - "Through personal contact with the employee(s) of the archive" - "Through bibliographic sources" - "Through the research tools on paper" "Through other documents consulted in the own archive"
	Q2: The District Archive that is used more frequently.	<ul style="list-style-type: none"> - District Archive of Porto, with 85 answers. - National Archive of Torre do Tombo (59 answers)- - AD of Lisbon (49 answers)- - AD of Braga and the University of Minho (43 answers). - AD of Coimbra (37 answers).
	Q3: Form of access to the information of the District Archives.	<ul style="list-style-type: none"> - Remotely - In person
	Q4: Most used form in the presence access. Q5: Most used form in the remote access.	<ul style="list-style-type: none"> - Request to the employee - Tools of Research (Catalogue/Inventory/Guide) - Other
	Q6: Form of knowledge of the funds and/or documents.	<ul style="list-style-type: none"> - Through personal contact with employee(s) of the archive - Through bibliographic sources - Through the tools of research on paper - Through the research instruments online - Through other documents consulted in the own archive - Through other documents consulted in another archive or other archives.
	Q7: Preferred form of research of the information in the District Archive.	<ul style="list-style-type: none"> - Remotely - In presence
	Q8: Format of the research tools that you already used in presence.	<ul style="list-style-type: none"> - Catalogue - Inventory - Guide - Other (online: e-mail):
	Q9: Format of the research tools that you already used remotely.	<ul style="list-style-type: none"> - "Consulta Real em Ambiente Virtual" (CRAV) - Research tools in electronic format - Research tools in paper format
	Q10: Most used research tool.	<ul style="list-style-type: none"> - "Consulta Real em Ambiente Virtual" (CRAV) - Research tools in electronic format
	Q11: Research formats carried out in the CRAV - Consulta Real em Ambiente Virtual (AD of Porto).	<p>[Scale "yes", "no", "do not know"]</p> <ul style="list-style-type: none"> - Issuance of copies/certificates; Intuition of the research tool; More researches needed; Were the research resources enough?; Access to the summary of the document; Need for physical consultation of the document after consulting the CRAV; Research tool allowed access to the digital information; Does the way information is organized and accessible generate new research?

	Q12: Nr of researches performed until the fruition of the final result	<ul style="list-style-type: none"> - Up to 4 - From 5 to 20 - More than 20
1.1. Features of the forms of access.	Q13: 3 more valued aspects in the access to the information in the AD.	<ul style="list-style-type: none"> - Easiness in the access to information using the research tools (catalogue/inventory/guide ...) - Information available in electronic format - Fastness in the access to the information - Understandable information - Information delivered by the employee - Other
1.2. Most valued aspects in the access to the information.	Q14: Reasons that hinder the access to the information in the District Archives.	<ul style="list-style-type: none"> - Not being able to accurately express your information needs - Not being able to find the information needed - Difficulties to interpret the information available - The research tools of the information generated by the Archive are not suitable - No reason hinders your access to the information in the Archives - Other
	Q15: Frequency of use of the services of the District Archive: both, in presence or remotely.	<ul style="list-style-type: none"> - Almost every day. - Once a week. - Once a month. - Once every 6 months - Once a year - Never
1.3. Frequency of use of the online service.	Q16: Frequency of use of the services:	Scale 1 – 5 [1 (never);5 (very often)] <ul style="list-style-type: none"> - Research online; Request of certificates on paper; Request of certificates in digital format; Request of research in the scope of the accomplishment of academic works; Request of research for the fulfilment of legal purposes; Request of research in the scope of the professional activity; Request of reproduction on paper; Request of reproduction in digital format; Request of performance of study visits; Acquisition of publications; Elaboration of genealogies (family tree); Request to guide cultural/didactic and leisure expositions; Reading Room; Room of Reference; Educational service and Cultural Extension; Service of Loan; Transcription of documents.*
	Q17: Overall satisfaction of the services provided.	<ul style="list-style-type: none"> - Yes - No
2 - Degree of satisfaction of the services rendered in the AD.	Q18: Assessment of the way the District Archive handled the request.	Scale 1-5 [1 (never); 5 (very often)] <ul style="list-style-type: none"> - Efficiency - Fastness
	Q19: Contribution of the research in the CRAV for the accomplishment of the objectives.	<ul style="list-style-type: none"> - Scale of 1 (less positive) to 5 (very positive)
2.1. - Degree of satisfaction of the users in the	Q20: Contribution of the research in the CRAV for the	Scale of 1 (less positive) to 5 (very positive) <ul style="list-style-type: none"> - Yes - No

researches/services.	accomplishment of the objectives. Q21: Considering the documentary research online: format of the research tools that you already used in presence and remotely.	* - Do not know
	Q22: Their contribution for the accomplishment of the research objectives.	Scale 1 - 5 [1 (less positive); 5 (very positive)]
	Q23: Habit of access to the website of the Digital Archives.	- Yes - No
2.2. -Degree of satisfaction regarding the content of the website.	Q24: Degree of satisfaction regarding the content of the AD's website.	[Scale: Very Unsatisfied; Unsatisfied; Indifferent; Satisfied; Very Satisfied; Without Answer] - Easiness in finding the information - Availability of pertinent information - Easiness in the recovery of the information required - Possibility of consultation without going to the services. *
	U25: Degree of satisfaction regarding the requests on the website.	[Scale: Very Unsatisfied; Unsatisfied; Indifferent; Satisfied; Very Satisfied; Without Answer] - *
2.3. - Degree of satisfaction regarding the requests of the website.	U26: Degree of satisfaction regarding the requests on the website.	[Scale: Very Unsatisfied; Unsatisfied; Indifferent; Satisfied; Very Satisfied; Without Answer] *