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User Experience and Web 2.0 in the production, distribution, and access of archival information in Portugal: a literature review

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INTRODUCTION

he dissemination and communication of information are functions of archival services and are those that allow access to the content of archival records and visibility of the work carried out; functions that are at the end of the line of all the others performed *a priori* (collecting, safeguarding, conservation, organization and description) and alongside the last one, access (because it depends on the fulfilment of the previous ones), whose relevance matters to the producer or the external researchers.

As Barros states, the particularities of the Internet environment, where aspects such as interactivity democratization of access to information, the breaking of geographical barriers the development of telecommunications technology, have modified not only the way of dealing with patterns of representation and organization of information until then the way in which information is

represented and organised, but also human behaviour and the way in which communication of contemporary society.¹

The current forms of communication involve the inclusion of users in the info-communication process. This change in the relationship between services and users can be seen, for example, with the adoption of web 2.0 tools and folksonomies, in the invitation made to the participation and collaboration of all in functions traditionally performed exclusively by technicians, namely, the description of contents and the creation of access points. In fact, the Information Society has changed the ways of accessing information. The emergence of the World Wide Web has revolutionised the way users, clients and citizens relate to information. The development of collaborative tools in what is known as web 2.0 has contributed decisively to the collaborative construction of knowledge, making use of collective intelligence in which everyone is both consumer and producer of information.²

Just as the way in which information is accessed and disseminated has changed in recent years, with great preponderance to the digital, web 2.0 platforms or social 2.0 platforms or social networks, memory institutions will also necessarily have to develop the ability to adapt to cyberculture and monitor the evolution of technology.³

The transformations of the digital society have brought about changes in the way archives, libraries, documentation centres and museums communicate, but these changes have not only been

¹ L. M. S. Barros, "A Folksonomia Como Prática de Classificação Colaborativa Para a Recuperação Da Informação".

² Ana Margarida Dias da Silva, "O Uso Da Internet e Da Web 2.0 Na Difusão e Acesso à Informação Arquivística: O Caso Dos Arquivos Municipais Portugueses",

³ Alvin Toffler, in his 1980 book *The Third Wave*, coined the term *pro-sumer* which blends the concepts of "producer" and "consumer", in what he understands to be a phenomenal increase in self-help and do-it-yourself activity, and, in the sense that we are all consumers and producers of information, memory institution services may see an opportunity for change here. Alvin Toffler. *A Terceira Vaga*. (Lisboa: Livros do Brasil, 2000), 383.

empowered by digital and technologies, thus these institutions also explore and embrace new roles beyond the mere collection and dissemination of information.⁴

One of the goals of memory institutions, such as archives, is to make available the information contained in the records they hold. Understanding about archival description has continued to evolve since the ICA formally embraced the development of standards as part of its mission in 1989.⁵

After a millenary empirical practice of organizing access instruments, the computerization of the sector closely followed the international rules of archival description, combined with the construction of standardized access points.

The increase in the availability of files in digital format has meant that information, which was previously only available to a restricted group of researchers, is now accessible to a wider group. Well, what about the user? Was the same considered when preparing archival descriptions? Do documentation access points reflect their information needs? In summary, do users know how to search the databases or analogue finding aids available to them? Several user studies have concluded that these instruments are not understood by the user.

Thus, the aim of the article is, based on the literature review on the topic of new finding aids, highlighting the new practices brought by web 2.0, namely collaborative practices and the input brought by the user who is also a content producer, to reflect on the Portuguese reality in this field. It seeks to analyse the context of User Experience and web 2.0 in the production, distribution, and access of archival information in Portugal, highlighting user studies and possible reflection on the representation of information, although previous studies carried out by the authors

⁴ Ana Margarida Dias da Silva, "O Uso Da Internet e Da Web 2.0 Na Difusão e Acesso à Informação Arquivística: O Caso Dos Arquivos Municipais Portugueses".

⁵ R. Audunson, H-C Hobohm and M. Tóth. "LAM Professionals and the Public Sphere".

conclude that there is a lack of reflection and production scientific and academic on the subject.

METHODOLOGY

The paper is a literature review based on the research carried out on Google Scholar platform, for the United States, Italy, France, Spain and the United Kingdom, countries that influence the understanding of archiving in Portugal. For the research in Brazil and Portugal, the RCAAP platform was used, which aggregates information in both countries.

The search was carried out in the title and keywords fields of the search expressions "description" AND "archives", "user experience" AND "archives", "Web 2.0" AND "archives", in Portuguese, English, Italian, Spanish and French for comparison, limited to publications from this century, given the novelty of the theme and open access publications.

The search was conducted in November 2021, and the results were a total of 72 papers.

RESULTS

Archival description, as stated by the International Council on Archives "[...] the creation of an accurate representation of a unit of description and its component parts [...] and explain the context and record systems which produced it" plays a major role in a process of mediation carried out by the archivist, who is responsible for adapting this representation of information to the needs felt by their users.

Traditionally, the use of descriptive tools such as guides, inventories, and catalogues, was based on archival theory developed

⁶ G. Gueguen *et al.* "Para Um Modelo Conceitual Internacional de Descrição Arquivística". *Acervo* 26, no. 2 (2013): 100-116.

in the late nineteenth century in Europe. Thus, they were instruments designed in their theoretical form and developed in accordance with the manuals, which already reflected the practice of elaborating records indexes as a way of accessing information.

Of the three access instruments, the inventory was the one adopted by the archival community as the finding aid of choice. Historically, the inventory is the research instrument of greatest use in archives, therefore it is infeasible to fund the production of other, more detailed tools, by the simple fact that their preparation would be extraordinarily time consuming (Ribeiro 1996, 22). As it is a hierarchical and therefore multilevel instrument, it describes the history and functions of the producing entity and the documentary series it generated during its activity. As Thibodeau puts it, "[...] this description is not about individual documents; it is about the whole".⁷

This fact forced archival users to realize that, for each document or even document series that they were looking for, they needed to know which institution produced it. The inventory approach focus was thus the unit of reference for archivists (the producing institution), and not necessarily for archival users.

In the 1980s, the progressive automatization of archives, together with international archival norms that maintained multilevel description, led to the appearance of archival inventories in text formats, available on archive websites. The research was also made available in the respective databases. The archives have thus gone from being a relatively closed memory institution (or only open to researchers and historians), to a massive availability of their contents through the internet.

At the beginning of the development of what would become the four description standards⁸ the ICA released the *Statement of*

⁷ International Council on Archives (ICA). Principles of Access to Archives.

⁸ General International Standard Archival Description- ISAD(G); International Standard Archival Authority Record for Corporate Bodies, Persons and Families-ISAAR (CPF); International Standard for Describing Functions -

Principles Regarding Archival Description⁹ in section 1.3, the arguments for standards for archival description: to ensure consistent, relevant, and explicit descriptions; to facilitate the retrieval and exchange of information about archival material; and to make it possible to integrate descriptions from different custodians into a unified information system. These objectives remain.

The description of resources and access to them are based on communication technologies. With the emergence of new media and methods, the communities for which description is a core activity have sought to exploit new technologies to reinvent description to make it more cost-effective and increase discovery, access, use and understanding, thereby more fully realizing its fundamental principles and goals. ¹⁰

With the guidance provided by the ICA standards, in particular ISAD(G), the archival community has made great strides in standardizing descriptive practice. However, much remains to be done before it can fully participate in and fully realize the opportunities that advanced and emerging technologies offer to make archival description significantly more effective in discovering, using, and understanding archival resources, in order to better serve communities that use archives, and attract new user communities.¹¹

User studies and user behaviour encompassing forms of research in archives have demonstrated both the difficulty that users experience when browsing archival information systems, as well as the lack of access points valued by them, namely dates, names, subjects, etcetera.¹²

ISDF; and International Standard for Describing Institutions with Archival Holdings - ISDIAH.

⁹ International Council on Archives (ICA). Principles of Access to Archives.

¹⁰ G. Gueguen *et al.* "Para Um Modelo Conceitual Internacional de Descrição Arquivística".

¹¹ G. Gueguen, "Para Um Modelo Conceitual Internacional de Descrição Arquivística", 108.

¹² Namely those of Daniels, Morgan G. and Elizabeth Yakel. "Seek and You May Find: Successful Search in Online Aid Systems"; Duff, Wendy and Catherine Johnson. "Where Is the List with All the Names? Information-Seeking

This fact not only constitutes a real problem for users more communally linked to archives: historians and genealogists, but it becomes even more striking when we talk about users with no experience, looking for archival information.

In an hypertextual environment as we live in today, in which producers and users of information are merged, and in which the conceptual configuration of the of the document is subject to constant revision, credibility, precision, accuracy and rationality of the information, the ways of producing, accessing and information have changed significantly.¹³

Based on the principle that Finding Aids are mediation instruments, Feliciat and Alfior also recognize their inadequacy, especially regarding their publication on the internet, not being sufficient to guarantee the usability of online archives¹⁴. Arguing that archives are more interested in making massively large sets of documents available and less or nothing focused on their understanding and usability, they state that the descriptions are sometimes so technical that they often must be explained in the reference services, in what the authors identify as "extended mediation".

Not surprisingly, Bertram¹⁵ defends the need for the participation of reference archivists when it is projected to make collections

Behavior of Genealogists"; Feliciati, Pierluigi, and Alessandro Alfier. "Archives Online for Users: Towards a User-Centered Quality Model Including a Comparative Evaluation Framework for User Studies"; Alfier, A., and P. Feliciati. "Gli Archivi Online per Gli Utenti: Premesse per Un Modello Di Gestione Della Qualità"; Yakel, Elizabeth, "Listening to Users"; Rhee, Hea Lim, "Reflections on Archival User Studies", and Darby, Paul and Paul Clough. "Investigating the Information-Seeking Behaviour of Genealogists and Family Historians".

¹³ Walter Moreira et al. "Abordagens Sobre Vocabulários Controlados para Arquivos: Conceitos, Aplicações e Metodologias".

¹⁴ Pierluigi Feliciati and Alessandro Alfier. "Archives Online for Users: Towards a User-Centered Quality Model Including a Comparative Evaluation Framework for User Studies".

¹⁵ Cara S. Bertram, "Putting the User First: The Importance of the Reference Archivist in Online Projects".

available online, since they really know how users search for information.

From the usability and UX studies of online finding aids and web pages of the archives, 16 some factors have invariably been pointed out as critical factors, namely:

- Use of archival terminology.
- Lack of clarity in the description.
- Lack of general research by subject on the websites.
- Lack of visual aids.
- Too many clicks to reach the desired information.

In Portugal, Fernanda Ribeiro's doctoral thesis on access to information in archives, defended in 1998, was presented as the first major study and survey of instruments for accessing Portuguese archives from the Middle Ages to the contemporary period. In it, the author refers to the lack of studies on the establishment of access points to retrieve information.¹⁷

Analysing the description instruments published in this country between 1889 and 1996 and verifying the existence of access points both for accessing the identification data of the archival unit (date, title, names, document typology and classification), as well as for the subject contents, indicates the lack of normalization that has existed in this area.¹⁸

The author also mentions that the automation of access instruments brought with it advantages in terms of information retrieval, since databases allow for the ordering of finding aids by

¹⁶ Namely those of Samantha Abram et al. "Sowing the Seeds for More Web Archives: A Usability Study of Archive-It"; Kim, Hyeeyoung. "Where Are We Again? A Content Analysis on Usability of Online Aids"; Walton, R. "Looking for Answers: A Usability Study of Online Finding Aid". and of Daniels, Morgan G., and Elizabeth Yakel "Seek and You May Find: Successful Search in Online Aid Systems".

¹⁷ Fernanda Ribeiro, *O Acesso à Informação Nos Arquivos*. 2 vols. (Lisboa: Fundação Calouste Gulbenkian, 2003, vol. 1), 48.

¹⁸ Íbid., 688.

different access points. 19 Nevertheless, "early computerized catalogues represented the automation of existing practice rather than is rethinking. 20

Ventura states that "that the assumptions that have guided the representation of information in digital platforms are traditional normative-instrumental, characteristic of traditional archival finding aids, aimed at describing documents, but they escape the user's understanding. Many of the archival finding aids have migrated to the digital environment without being designed for that purpose". ²¹

In her paper, Ventura used criteria of organization and representation of the information centered on the user.²² She argues that empirical studies have shown that the user recognizes in the representation of information a fundamental criterion for its retrieval and that the results showed that a user approach was achieved through the selection and simplification of content description and the creation/adaptation of menu tags to user preferences or needs.²³

Early this year, Silva & Borges presented the work "Evaluating User Experience of the Portuguese District Archives Websites" where they analysed the user experience (UX) that researchers have had when accessing the websites of the Portuguese district archives. Using a questionnaire (google forms), where it is possible to measure attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty and an observation of the district archives websites was also conducted to recognize its similarities and/or differences. The authors concluded that the UX is positive, the

¹⁹ Fernanda Ribeiro. O Acesso à Informação Nos Arquivos, 694.

²⁰ M. Jones, "From Catalogues to Contextual Networks: Reconfiguring Collection Documentation in Museums", 4-20.

²¹ Maria Isabel de Almeida Ventura, "Desafios Da Representação Da Informação Nas Plataformas Digitais Dos Arquivos: O Caso Do Arquivo Do Jornal Público Norte", 52.

²² Íbid., 61.

²³ Íbid., 66-69

²⁴ Ana Margarida Dias da Silva and Leonor Calvão Borges. "Evaluating User Experience of the Portuguese District Archives Websites".

results showed that users have no great enthusiasm: none of the six scales that group the 26 questions exceeds the 5.5 average, but neither does it fall below 4. An assessment below 3.5 was an indicator of need for change, in this case this is not the case. With their study, it is possible to verify that, although the websites of the district archives have not been the subject of UX studies, (known or published) their use is seen as mostly pleasant.

DISCUSSION

The transition from access to material finding aids to digital ones, accompanied by the increasing digitization and availability of collections on institutional websites has changed the way information is mediated between the archivist and its users.

In the 21st century, the massive availability of online content, institutional or through sharing on social platforms, requires new models of indexing and information retrieval. It is in this context that folksonomies and social indexing have emerged, boosted by the advent and generalization of collaborative web 2.0 tools, where the passive user has become both consumer and producer of information.²⁵

At the same time, archives are increasingly making advantage of the seamless environment and the web 2.0 platforms. One can see ongoing crowdsourcing²⁶ citizen science²⁷ and collaborative projects based on the documents and information of archives all over the world.

²⁵ Ana Margarida Dias da Silva and Leonor Calvão Borges. "Texto versus Imagens? Folksonomias e Indexação Social Em Arquivos".

²⁶ As can be seen in Ana Margarida Dias da Silva, Leonor Calvão Borges, and Maria Beatriz Marques. "Crowdsourcing in History Projects in Local Archives of Portugal and the England: A Comparative Analyses".

²⁷ Ana Margarida Dias da Silva *et al.* "The Value of the Botany Archive of the University of Coimbra (Portugal) to Biodiversity Research, Crowdsourcing and History of Science Projects".

Web 2.0 platforms have been changing the relation between archives and users on the invitation to participate and collaborate in functions traditionally performed exclusively by the technicians, namely, the contents description and the creation of access points.²⁸

Despite the contributions of folksonomies and user-generated content in improving archival information access points, studies on users, usability and User Experience developed in archives have repeatedly concluded that finding aids were inadequate. This analysis has also been registered in Portugal, the conclusions of the studies not differing substantially from those of its foreign counterparts. However, the question about the usability and user experience of public archives sites in Portugal has been absent from academic reflection, being almost non-existent.

The proposal of next generation finding aids is thus based on these studies, suggesting some authors that these access instruments are "under constant construction and revision, never finalized because of the dynamics that involve the process of representation of information and never exhausted in itself, due to the nature of the network that it acquires from the internet platform".²⁹

For an archival description or a controlled vocabulary to become effectively useful, it must be organized to reflect both the objectives of the information system for which it was developed, that is, the language of the system, as well as the language of the users.³⁰

The mediating role of archives lies in their ability to allow access to their collection through the organization and representation

²⁸ Ana Margarida Dias da Silva, "Folksonomies in Archives: Controlled Collaboration for Specific Documents".

²⁹ Ricardo Sodré Andrade and Rubens R. G. da Silva. "Aspectos Teóricos e Históricos Da Descrição Arquivística e Uma Geração de Instrumentos Arquivísticos de Eeferência".

³⁰ Walter Moreira *et al.* "Abordagens Sobre Vocabulários Controlados Para Arquivos: Conceitos, Aplicações e Metodologias", 3.

of the information contained in the documents. Thus, UX Design emerges as a possible way to qualify the browsing experience on the websites of the district archives, which can serve to improve this communication.

CONCLUSIONS

The understanding of archival description has evolved, as have the information technologies required to represent and communicate it. The search for information in archives has moved from analogue finding aids according (or not) with archival international regulations to the digital world without a deep reflection on their understanding and, therefore, apprehension on the part of users.

The implementation of web 2.0 allowed the possibility of co-describing contents with archival users. Projects using folksonomies to generate access points have shown a high participation and effectiveness in the description of content.

The advent of usability and User Experience studies allowed for a detailed analysis of how institutional archives websites and archival description databases consulted online can be improved, enabling more effective communication.

In Portugal, the conduction of studies of archive users, there covering usability and UX users, has been sparse, being an area to be developed. However, the results of the studies carried out seem to suggest.

Regarding the limitations of this study as it was based on a literature search of specific terms, there is a limitation on the platforms searched for content retrieval.

Nevertheless, knowledge acquisition of new possibilities of next generation finding aids is still enriched through the study of usability and User experience research.

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