# Twenty years of research in Information Design: a section of Brazilian scientific production on digital media

*Vinte anos de pesquisa em Design da Informação: um recorte da produção científica brasileira sobre mídias digitais*

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systematic review, digital media, Brazilian Science, hypermedia

With the increasing predominance of the use of digital artifacts, fast technological evolution, and the inherent complexity of the digital era, studies on how to communicate information are relevant since the beginning of the Information Society in the 1990s. With the efficiency of information communication as its central focus, Information Design (ID) can be an important area in the construction of knowledge about digital media. This article presents a systematic review of the Brazilian scientific production of digital media through the look of Information Design to record the development of ID in the country since the first CIDI+CONGIC event in 2003. The review pointed to some prominent themes in these decades, such as infographics and interfaces used for science and education. It also revealed some universities with an emphasis on the type of scientific production investigated. In addition, some difficulties were noticed at the conception of a registry of Brazilian science due to the change in terminologies and the evolution of theoretical approaches over time.

*revisão sistemática, mídia digital, ciência brasileira, hipermídia*

*Com a predominância crescente do uso de artefatos digitais, a rápida evolução tecnológica e a complexidade inerentes da era digital, estudos sobre como comunicar informação são relevantes desde o início da Sociedade da Informação na década de 1990. Tendo foco no planejamento de comunicação da informação de modo eficiente, o Design da Informação (ID) pode ser uma importante área na construção de conhecimento sobre mídias digitais. Este artigo apresenta uma revisão sistemática de produção científica brasileira sobre mídias digitais balizadas pelo olhar do Design da Informação com objetivo de registrar o desenvolvimento do ID no país a partir do primeiro CIDI+CONGIC em 2003. A revisão aponta algumas temáticas proeminentes nestas décadas, como a infografia e interfaces voltadas para ciência e educação, além de apontar algumas universidades com destaque no tipo de produção científica investigada. Além disto, foram registradas dificuldades na concepção de um registro da ciência brasileira pela mudança de terminologias e evolução de abordagens teóricas ao longo do tempo.*

## 1 Introduction

Information Design (ID) is a Design area where the effectiveness of the message to be conveyed is the main focus. This means that regardless of the media used, ID evaluates cognitive, ergonomic, practical, and aesthetic variables to enable the best possible understanding of the available information. In 2003, twenty years ago, some milestones of Information Design in Brazil took place: the foundation of the Brazilian Society of Information Design (SBDI), the first International Congress of Information Design and the National Congress of Scientific Initiation in Information Design (CIDI+CONGIC) and the founding of InfoDesign journal. Although Design teaching and research in Brazil already existed, we can consider these events as a symbol of the officialization of Information Design as a relevant field in Brazil.

In the meantime, technological evolution and cultural changes intensified access to the internet and to digital devices (such as computers, smartphones, tablets…), which became increasingly popular since the Information Society start in the 1990s. Between 2005 and 2021, Brazil's population with internet access increased by 60%, reaching 81% of the population. Due to that, more information consumption through digital media took place, so discussions about digital media remained relevant throughout the years. The growth of internet access in Brazil in parallel with the advance in the construction of scientific knowledge in the area of Information Design raised curiosity about how Brazilian science interpreted the advance of digital media in the country. Focusing on Brazil's ID research in parallel with the digitalization of the country, this paper presents a review to overview how Brazilian Universities and ID researchers explored the growing digital media throughout the last 20 years. Therefore, to make a partial registry of the history of Brazilian scientific production on digital media, a systematic review was carried out using the Systematic Search Flow method (Ferenhof & Fernandes, 2016). For this review, the time frame started from 2003, using the first CIDI+CONGIC as a "starting point". We also searched for documents that had the intersection of ID with digital media as theme. An initial return of 141 documents resulted in 49 references for poster verification, presented in this paper. Since this review deliberately sought to register part of Brazil's development in ID research during the popularization of digital media, both the Databases and keywords used discriminated specifically Brazilian research written in Portuguese.

Some implications and patterns could be identified, such as common themes, leading Universities and journals, and distribution of scientific production over the years. This registry ended up serving as a small historical overview. It also displays some challenges typical of the digital age: the high complexity among different technologies and interfaces that can mediate the same kind of material, and some challenges in the construction of a (Brazilian) science registry, as terminologies and theoretical approaches change over time.

## 2 Review context and motivation

Since the end of the 20th century, the "Information Society" phenomenon has been observed in which internet and computer popularization is vastly witnessed (Castells, 1999). This phenomenon is characterized by the high penetration of technology and information. Digital media becomes a filter for culture, with the "computer" being a mediator for all human interactions, from work to leisure (Manovich, 2005). The computer has been a tool for Design projects since the 1990s and, even so, discussions about hypermedia, digital media, and information are current, relevant, and necessary to understand a society where the "era of continuous connection" (Santaella, 2018, p. 17) and the prevalence of the digital space change how information can be accessed and understood by the public.

One of the ways of defining what this "new media" means is noting that content is produced and accessed through some kind of digital media and technology, for instance, with the use of smartphones. Another way of understanding how the digital age modifies the mediation of content is the notion of "metamedia", in which old media is re-functionalized for digital media, such as watching a 1942 movie through digital platforms (Manovich, 2005). This does not mean, however, that these paradigm shifts make previous media disposable, as is seen, for example, that e-readers did not eliminate the existence of physical books – what happens is the movement of the cultural panorama (Santaella, 2018).

In spite of that, a digital artifact is not "merely a support", as a paper is for printing, for example. Hence, studying Information Society only from the perspective of technological evolution wouldn't be sufficient, as it is necessary to understand how information becomes central in the relationship between people and work, mediated by the use of different technologies (Castells, 1999; Sless, 1994), which increases the complexity of communication and makes the contact between designer and public more difficult. Digital media brings new communicational challenges, whether of a technological, cognitive, or aesthetic nature.

For Cardoso (2016) Design is a hybrid, strategic, and informational area that grabs different domains of knowledge to materialize abstractions, operating the junction between user, artifact, and system, or between body and information. Furthermore, the author points out that Design should not be seen as an immutable body of fixed dogmas, but as a field that "reveals itself as it is navigated" (p. 238), being a dynamic and multifaceted area in constant evolution. Likewise, Sless (1994) points that:

> Unlike the intimate pre-industrial context in which the designer and user of information were both physically and socially close, in the post-industrial society we are physically remote and socially different from many of the users of information. Thus there may be a profound gap of understanding between us and information users. [...] Additionally, it means ensuring that the process – the intangible trace of information use – is satisfactory. The primary focus is no longer exclusively on the making

of artifacts. In our own society, the challenge is to satisfactorily manage the process, the relationship between information and user. (p. 6)

In addition, Bonsiepe (2015, p. 42) argues that this question can be guided by the differentiation of the way graphic design traditionally functions, where the designer works as a "visualizer" through the organization of visual aspects, such as color and typography, to translate the message. However, in the Information Society, it is necessary to think about the organization of information as a immaterial artifact, beyond its visual organization, therefore, the designer must become an "information manager".

While on that subject, Information Design can be described as "the defining, planning, and shaping of the contents of a message and the environments in which it is presented, with the intention to satisfy the information needs of the intended recipients" (IIID, 2023, online). And it is added that "Information design, ID, comprises analysis, planning, presentation and understanding of a message – its content, language and form. Regardless of the selected medium, well designed information set, with its message, will satisfy aesthetic, economic, ergonomic, as well as receiver and subject matter requirements." (Pettersson, 2012, p. 132). That is, the field is characterized by how to plan the communication of information effectively, regardless of the media used. Consequently, this specific approach to Design, focusing on the message and the information, can be positive for studying the complexity of digital media.

In Brazil, ID had major milestones in 2003, with the realization of the first International Congress of Information Design and National Congress of Scientific Initiation in Information Design (CIDI+CONGIC) in Recife (Pernambuco) – an event that was carried out by the newly founded Brazilian Society of Information Design (SBDI, 2023; Redig, 2004). Moreover, with the formalization of the Infodesign journal in 2004, a pioneering publication in the area of Latin America (InfoDesign, 2023, online), ID had an official space in Brazilian scientific production.

In parallel with these milestones, even though digital inclusion in Brazil has gone through several challenges that left access to the internet limited to some groups in the 1990s and 2000s (Becker, 2013), there was an increase of 21% of the population with access to the internet in 2005 to 81% of the Brazilian population connected in 2021 (CETIC.BR, 2022, 2006).[1] Meaning that in 2023 there is a more inclusive scenario for the use of digital media, showing the progression of adherence to the digital medium in the country.

Thus, as part of the initial steps for the author's theses research, we questioned how Information Design guided discussions on digital media in the last 20 years in Brazil. This investigation sought to unveil and register part of Brazilian scientific production at the intersection of ID and digital media in order to register part of this constantly evolving history. The authors intendend to build an overview of the scenario of digital media and ID in Brazil over the last 20 years in order to evaluate trends, popular terminologies and, therefore, aim for more specific

[1] CETIC.BR was created in 2005 to monitor the adoption and use of Information Technology in Brazil.

research in light of this initial panorama. Therefore, this review was built out of Brazilian Databases and used Portuguese keywords in search for Portuguese-only documents.

## 2.1 Systematic Search Flow

For the proposed investigation, in February of 2023, a Systematic Review (SR) was carried out following the Systematic Search Flow method (Ferenhof, Fernandes, 2016). This method proposes three main phases: 1. Definition of the research protocol; 2. Data analysis; and 3. Synthesis. These phases can unfold into sub-phases according to the central objective of each of these major steps.

The initial search strategy suggested by Ferenhof and Fernandes (2016) includes specifying which databases will be accessed, according to the relevance for the researched topic. Furthermore, a search query with logical operators must be formulated beforehand. It is reinforced by the authors that, in order to avoid inconsistencies in the SR, it's necessary to use the same query throughout all databases, standardizing the search between platforms.

The review was carried out in BDTD[2] (Digital Library of Theses and Dissertations) and in Portal de Periódicos da Capes databases, both comply with the criteria for reviewing open-access research, in addition to being Brazilian databases. The first database brought out theses and dissertations documents, while the second one was used for papers publications. The tools used to organize and filter the search results were Zotero and Office Excel. Zotero was chosen because it is a free software, facilitating the replication of the proposed review.

To focus the search on scientific production in Brazil, this review limited the filtering of publications in Portuguese, the country's official language. The temporal focus, as discussed before, seeks studies in the period from 2003 to 2023. For this paper, the review of the cross-use of the "information design" term with some terminologies about digital media was chosen. The choice for these terminologies aimed to seek digital media research in a more general way, as a base review that could unfold into further reviews by specific approaches, study objects, or specific media and technologies – such as UX, remote teaching platforms, virtual reality or smartphone apps, respectively. The operational query used was written as:

("design d? informação") AND ("mídias digitais" OR "mídia digital" OR "hipermídia" OR "digital" OR "novas mídias")

For context and possible comparative research of bibliographic production in other languages or countries, the query terms can thus be translated from Portuguese to English:

("information design") AND ("digital media" OR "hypermedia" OR "digital")

**2** Brazilian repository of scientific production cataloging dissertations and theses from across the country.

Using this query, the first data collection was carried out to then proceed with the next steps suggested by Fehenhof and Fernandes (2016), which involve other procedures necessary for refining data and organizing them, before the analysis phase.

Data obtained in the Portal de Periódicos da Capes database were exported in RIS format to be organized in Zotero. But in the BDTD database, data export at the time of this review was only in JSON or CSV format. Because of this, a free JSON to RIS file converter was used as a complement to facilitate the organization of data. This converter was developed by a qualified developer, at the request of one of the researchers, staying available[3] for free use by other scientists from then on.

The research in both databases resulted in a total of 141 documents, 85 from BDTD and 56 from Portal de Periódicos da Capes. Then, a manual check for duplicate references was made, reducing the total number of references to 125. Documents in English or Spanish that were accidentally collected in the databases were also excluded from this filtering for duplicates. Afterward, a first review filter was performed, in which a preview reading of the title, abstract, and Keywords verified the adherence of the references to the theme of the review: thinking about digital media from the perspective of information design. This also helped in the perception of areas where the documents are classified, fitting in Design or related areas such as Communication or Information Science, mainly. After this initial reading, 72 documents were classified for further investigation.

Already, some interesting facts came up from this preview reading of selected documents. An intersection between Information Science and Design was frequent: of the 72 documents analyzed, 13 were publications in the area (table 1, further on), that is, 18% of the results found originated in this field. Information Science also presented itself with a co-author as a recurring reference in several studies, Professor Maria José Vicentini Jorente (UNESP), who appears as a co-author in nine of the listed documents.

Another general perception was the pertinence of research involving science and education, whether in the evaluation of platforms and websites, evaluation of digital Science journals, or educational objects, amounting to 19 of the samples. Other common themes were related to infographics, data visualization, and/or digital journalism, totaling 17 of the searches found.

**3** JSON to RIS converter: https://felipeaf.github.io/ BdtdToRisConverterWebApp/

**Table 1** Proportion of documents found among the three main major areas present in the systematic review.

| Area | Papers | Dissertations and theses | Total | Out of 100% |
|---|---|---|---|---|
| Design | 18 | 31 | 49 | 68% |
| Information Science | 10 | 3 | 13 | 18% |
| Communication and/or Art | 1 | 3 | 4 | 5% |

4 Jorente, M. J. V., Nakano, N., Batista, L. da S., & Rodrigues, N. L. F. (2016). Design da Informação na criação de um modelo para o Museu Afro Brasil: Um estudo comparativo. *Brazilian Journal of Information Science, 10*(2), 65–73. https://doi.org/10.36311/1981-1640.2016.v10n2.08.p65

5 Giannella, J. R. (2014). *Dispositivo infovis: Interfaces entre visualização da informação, infografia e interatividade em sítios jornalísticos*. https://doi.org/10.11606/D.27.2014.tde-13112014-111734

The recurrence of documents in the Communication/Art and Information Science fields shows the complexity of digital media, which can be explored by several areas in a complementary way. Interestingly, much of what was found in Information Science is close to Information Design itself, such as the research by Jorente et al. (2016)[4] that evaluates access to information in museum websites whose information architecture is still based on web 1.0. In the case of theses and dissertations categorized as Art or Communication, it is seen the history of framing Design in these intersections depends on the approach and context of each University. Following the chosen method, the exclusion of documents not classified into the Design field was already foreseen as part of the review strategy, nonetheless, it was remarkable how these related areas could enhance the repertoire of ID. It was also noted that many investigations framed as Art or Communication approach Design with related perspectives and themes, as in the case of Giannella's research (2014),[5] in which she works with journalistic infographics in the digital environment.

Moving on to the second stage of filtering, only Design theses and dissertations, as well as articles published in periodicals in the field, were selected for investigation.

Out of the 141 initial documents (125, disregarding duplicates), our review ended up with 49 documents for data analysis and synthesis. At this point, a bibliometric evaluation was performed to find keywords and recurrent authors, as proposed by Ferenhof and Fernandes (2016). These results and discussions about what was found are described in the following topic.

## 3  Results and discussion

From the analysis and synthesis of the productions found by the review described in the previous item, in February 2023, 49 productions fit the objectives of this search: Brazilian scientific production published since 2003, in Portuguese, and within the proposed theme. From now on, XML and CSV file formats were exported from Zotero to Excel, where the analysis presented below was performed.

There was a great predominance of articles published by InfoDesign itself. The research did not investigate, however, how much this could be caused by the possible bias of the term "design d? informação" (information design) or if it was simply because of the theme of the journal itself. Nonetheless, 15 out of 18 papers found were InfoDesign publications, namely (in their original English titles):

**Table 2** Papers published by InfoDesign.

| Title | Author(s) | Year |
|---|---|---|
| Digital interfaces of food delivery services: Semiotics analysis of iFood platform applications | Da Costa & Velloso | 2021 |
| Digital formats of open access scientific publication: An information design analysis | Dick, Gonçalves & Rodrigues | 2017 |
| Comics in the context of mobile devices: Theoretical aspects and usability analysis | Fensterseifer et al. | 2016 |
| Visual complexity of the digital interface and satisfaction of use: An analysis in informational websites | Fernandes, Botura & Paschoarelli | 2017 |
| Cognitive aspects of Information Design for eHealth digital environments | Landim & Jorente | 2019 |
| "LA CAPA DE PAPEL": How to raise the reader's attention in instructional manuals for health education | Medina et al. | 2018 |
| Aesthetic impression and experience as a guideline to design e-learning objects | Mülling & Pereira | 2009 |
| "Let me make you mine": Proposal of a descriptive instrument for digital interface personalization mechanisms | Padovani & Puppi | 2020 |
| Information design in the hypermedia | Passos & Moura | 2007 |
| User experience and interaction design: A bibliometric analysis of academic publications | Polimeno et al. | 2022 |
| Complex questions about information and interaction Design | Portugal | 2010 |
| Hypermidia contributions on comics for reading and learning experience | Presser & Braviano | 2018 |
| Using Adaptive Hypermedia for teaching Information Design | Reis & Monat | 2007 |
| Challenges for Information Design in Augmented Reality | Tori | 2009 |
| Typography application dimensions and factors in digital books | Woloszyn & Gonçalves | 2018 |

Although Communication, Arts, and Information Science were important related fields in the review, most theses and dissertations found were specifically from our Design area, counting up to 31 studies. Most theses and dissertations were produced at the State University of Rio de Janeiro (UERJ) and the Federal University of Rio Grande do Sul (UFRGS). Together, the most prominent institutions in terms of the number of publications collected accumulate 78% of the theses or dissertations listed in the review, with the share of each being as follows:

**Table 3** Institutions with the highest volume of publications related to Information Design and digital media.

| Institution | Publications | Out of 100% |
|---|---|---|
| State University of Rio de Janeiro (UERJ) | 6 | 19% |
| Federal University of Rio Grande do Sul (UFRGS) | 6 | 19% |
| Federal University of Paraná (UFPR) | 5 | 16% |
| Federal University of Pernambuco (UFPE) | 4 | 12% |
| University of Brasília (UnB) | 4 | 12% |

The prevalence of these Universities in the results seems consistent with the scientific production of their respective research programs. All these Universities present postgraduate research and classes that investigate themes of information, technology, or even interaction and virtual or digital design.

With these first observations made, a specific question was asked: according to the keywords, what would the main perspectives on digital media and ID be? Excluding the terms "information design" (29 recurrences) and "design" (10 recurrences), the most used keywords indicated studies on interaction, hypermedia, and mobile devices. However, some approaches, technologies, or study objects were mentioned with different terms, such as UX (which was found as "experience" or "user experience"), or online newspaper (journalism, online newspaper, digital journalism...). In this case, the overall terminology was grouped as "UX" and "Digital Journalism" in the table below:

**Table 4** Most used keywords.

| Recurrence | Keyword (EN) | Keyword (PT) |
|---|---|---|
| 6 | Interaction design | Design de interação |
| 5 | Mobile devices | Dispositivos móveis |
| 4 | Hypermedia | Hipermídia |
| 4 | Digital Journalism | Jornalismo Digital |
| 4 | UX | UX |

The repetition of the keyword "mobile devices", in this case, discloses a challenge in reporting the research on digital artifacts, given that at times the term referred to smartphones, and at other times it meant *tablets*. The complexity of the use of different technologies, which expand media possibilities, seemed to harden the scientific production scan because it could pulverize a single term between various technologies or interfaces. Returning to the example of digital media not emulating exactly what paper does for printing, this reflection unfolds from the perspective that a book, previously physical, can now be viewed on e-readers, computers, or mobile devices – whether these are tablets or smartphones. And each one of these has its own set of particularities. In short, it was noticeable that the complexity of the digital age is found not only in the proliferation of interfaces but also in the expansion of possible objects of study.

About the approaches of the selected studies, as briefly commented before, themes of data visualization, infographics, and journalism or objects with educational purposes were the most popular themes found. After the second screening to evaluate the studies, it was noticed that the topics of greatest interest are still focused on science and education, computing 13 of the studies listed (table 5), that is, 26% of the research found. Studies on infographics, data visualization, and journalism also

remain meaningful, appearing in 10 of the studies, or 20% of the results. Another topic of perceived interest was the mapping of cities and geolocation. And, although this topic could be approached indirectly in any of the studies, using the title, abstract, and Keywords as parameters, only two of the studies aimed to investigate accessibility in the digital space.

**Table 5** References for the publishings with the most frequent theme of the review: science and education (original English title when available).

| Title | Author(s) | Year | Publisher |
|---|---|---|---|
| Digital formats of open access scientific publication: an information design analysis | Dick, Gonçalves & Rodrigues | 2017 | InfoDesign |
| Educational Technologies: Quizizz Platform Interface Analysis Based on Information Design Principles | Figueiredo et al. | 2021 | DAT Journal |
| Modelo de referência para o design de produto educacional considerando a base tecnológica da TV digital interativa | Kipper & Silva | 2013 | UFRGS |
| Objetos educacionais digitais: contexto e aplicação prática em ambiente de ensino | Lameira & Coutinho | 2016 | UFPE |
| "LA CAPA DE PAPEL": how to raise the reader's attention in instructional manuals for health education | Medina et al. | 2018 | InfoDesign |
| Framework conceitual para aplicação no desenvolvimento de objetos de aprendizagem: infográficos interativos | Lorezon, Aymone & Silva | 2013 | UFRGS |
| Aesthetic impression and experience as a guideline to design e-learning objects | Mülling & Pereira | 2009 | InfoDesign |
| Recomendações para o design de conteúdos educacionais digitais baseados em texto no cenário da mobilidade | Nunes & Gonçalves | 2017 | UFSC |
| Hypermidia contributions on comics for reading and learning experience | Presser & Braviano | 2018 | InfoDesign |
| Using Adaptive Hypermedia for teaching Information Design | Reis & Monat | 2010 | InfoDesign |
| Infográficos interativos como material escolar: um estudo sobre a utilização de infográficos digitais interativos para compreensão de conteúdo escolar no ensino médio | Santos & Campello | 2015 | UFPE |
| Análise de formatos de documentos eletrônicos para disponibilização de artigos em periódicos científicos online | Silva & Silva | 2015 | UFRGS |
| Proposição de processo de design para infográficos interativos com fins educacionais | Thomas & Silva | 2016 | UFRGS |

Finally, thinking about the evolution of technology and the intensification of digital interfaces use in daily life, it was questioned whether any growth in the volume of studies would be observed as seen by Polimeno et al. (2022) in a review about Interaction Design and User Experience. However, in the case of our review, no significant variation was noticed in the number of publications over the years, even though between 2003 and 2006 there were no results and a slight increase in publications in 2013 and 2017 can be seen (Graph 1).
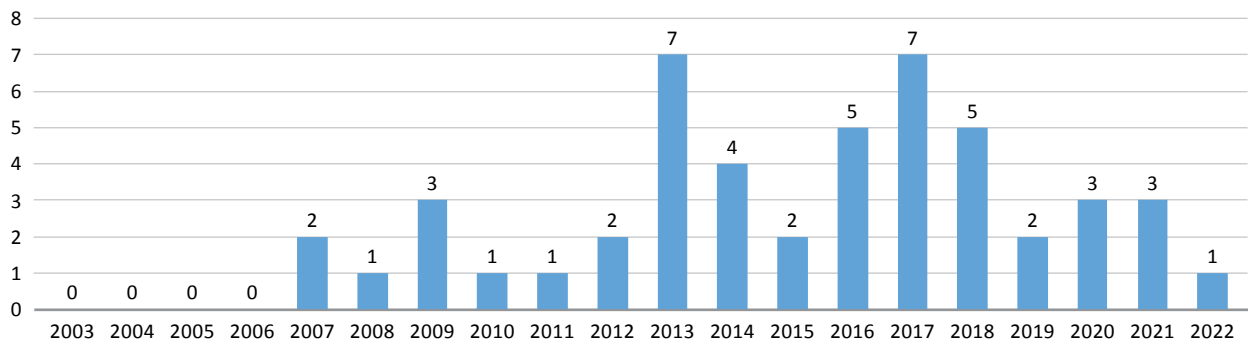
**Graph 1** Temporal distribution (2003–2022) of the final results of the systematic review (The authors, 2023).

The search query did not find any studies prior to 2007, but this does not imply that digital artifacts were not being studied, but rather that discussions would be guided in different ways or even that the availability of older material may be insufficient in the databases. One assumption about this "lack" of results would be the change in the terms used over the decades, being possible that, for example, in a certain period the term "web" was more used to name what we, nowadays, usually specify as "media", "digital" or "hypermedia". An indication of this was the frequent use of the keyword "mobile devices" meaning "smartphones" or "tables", as previously seen. This could bring more challenges to building a memorial to the digital age, considering trends and changes in the use of terms and the use of different technologies.

It is also reinforced that, despite the unique increase in documents volume in 2013 and 2017, the amount assessed is not sufficient to make general or statistical inferences about scientific productivity in the period investigated. What was noticeable is the continuity of the theme over the years, reaffirming that digital media is historically significant for research.

## 4 Final considerations

Aiming to observe a temporal and thematic section of Brazil's scientific production linked to information design and digital media in the last 20 years, this article investigated the Portal de Periódicos da Capes and BDTD databases with a query intersecting digital media terminologies with information design. With this, a brief outline explaining some Brazilian paths and perspectives in the exploration of how to inform in the digital environment was constructed, which could help in the description of new reviews to build a history of the construction of knowledge in the field.

As noted, even though the quest for more general terms sought to avoid too niched studies, it ended up reinforcing the complexity of the digital age and the multidisciplinarity around communicating information in digital artifacts. This was reflected in the difficulty with specific terms for certain theoretical approaches (as in the case of UX) or in using terms that can define different interfaces, as was the case of "mobile devices". Multidisciplinarity and complexity can also be perceived in the

tangent of Information Science in the research carried out. As objects of study, infographics, data visualization, digital journalism, or science and education were the protagonists in the studies found. As initially pointed out, this review sought to elaborate an overview of Brazilian scientific production on DI and digital media, so the query used broad terminologies. Given this generalist quality, trends were perceived in the results. As pointed out throughout the discussions, it was noted that over the years the terminology about the digital environment changes both for the inclusion of new terms, because of technological changes and the use of different media. Therefore, it is suggested that future reviews consider specific terminology according to a certain period of time (such as "web design" or "UI", for example) and/or technologies enabling less restricted results. Or, even, consider a specific timeline and/or technology in order to achieve specific results according to their objectives.

It was possible to register part of the history of knowledge marked out by Information Design in Brazil. However, given the scope, several studies with more specific approaches (such as affordance, usability, natural interfaces, and cyberculture, for example) may not have been found. In future reviews, it's suggested to supplement the terms used to locate and record more of the national knowledge network. Another possibility would be the search for terms in English to visualize scientific production in English made in Brazil, which, despite not being the current language, may have relevant results not found because they are aimed at an international audience, as is the case of this article.

Given the above, it is concluded that describing the historical processes and evolution of Information Design research can present its own challenges, especially when dealing with information in the digital age. Even so, this historical record can be interesting to note the evolution of more prominent theoretical and thematic approaches in Science.

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