

Priority themes on active transparency in federal institutions of higher education: A systematic mapping



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ABSTRACT

Initiatives aimed at citizen participation, transparency and the use of technologies have led public management to new directions. Open government is an international initiative that encourages governments that are more transparent, accountable and open to social participation. An interesting initiative applied in Brazil is the proactive dissemination of information of collective interest to society by these bodies and entities, including federal institutions of higher education (IFES), due to their social role and potential for disseminating knowledge to society. . In this context, the objective of this work is to identify which are the themes of collective interest in IFES for the due fulfillment of active transparency. For this, a bibliographic survey, a documentary research and a systematic mapping study were carried out, enhancing the results found. As a result, some general and specific themes of collective interest in IFES were identified.

Keywords: Open Government, Active Transparency, Freedom of Information Act, Federal Institutions of Higher Education.

1 INTRODUCTION

Since antiquity, the concept and application of democracy as a political regime has been discussed, mainly because of its original meaning, from the Greek government of the people to the people, and the distance that occurs between discourse and practice. When analyzing the evolution of democracy, Bauman and Bordoni (2016) consider the concept of democracy as something vague and fluctuating, especially by the configuration of majority domination over the minority that occurred at different times with the application of this political regime.

During the military dictatorship, Brazil was marked by a peculiar moment regarding the application of democracy, giving rise to several social movements that fought and sought the recognition of various rights, among them, participation in the decision-making of public management (Gohn, 2008). It is understood that including the citizen in the process implies the democratization of



public decision-making. In addition, Macadar, Lheureux-de-Freitas and Moreira (2015) understand that the social pressure that occurred in this period added to the most recent technological advances, has acted in a way to consolidate democracy.

In response to social demands for participation, public management has been undergoing some reforms and applying organizational models that suit these needs, this is because the participation of society is based on the belief that those who are directly affected by the determinations of public administration have the right to participate in the decision-making process, as The Open Government Partnership [OGP] (2023) points out. The most varied organizational models have sought to meet this logic, being the object of potential study in the field of public management, highlighting worldwide *the New Public Management, New Public Service, Collaborative Governance* (Blasio & Sorice, 2017); in Brazil, the managerialist models and societal management stand out (Paes de Paula, 2005).

Consistent with the desire for social participation, the demand for information is also one of the highlights in society since 1970, and has increased its value to levels never before achieved (Mesquita, 2014). Equipping the information society in an adequate and intelligible way can generate effectiveness in social participation (Almeida & Freire, 2015) and, in this sense, Zorzal and Rodrigues (2015) understand transparency as a way to promote a public management that aggregates the participation of society, converging the organizational culture, which provided for information as confidential, to a culture that understands information as a public good. This understanding has been disseminated internationally through the Open Government movement since 2009, starting with the memorandum issued by Obama, president of the United States at the time, through the availability of open data and citizen participation, reiterating its intention to be a more transparent and collaborative government (Gascó, 2015; White House, 2009).

Brazil is one of the countries that participate in this movement and since 2011 is part of the Open Government Partnership, an international initiative for its commitment to the principles of open government (OGP, 2023).

Several initiatives were carried out by Brazil for a greater approximation and compliance with the principles of this movement. It is possible to highlight at least three of them: Decree 10.160/2019 that instituted the National Open Government Policy, established its guidelines and provided for the creation of the Interministerial Committee on Open Government; Law 14.129/2021 that defines the principles, rules and instruments of Digital Government; and, the initiative that is the object of this study, the commitment to the provision of information without the need for requirements, that is, in an active way, by government agencies and entities.

It is a legal provision that obliges all institutions to act spontaneously and in accordance with the public interest. Among the entities that constitute the Public Administration there are the federal autarchies and the public foundations, under whose profile are inserted the federal institutions of higher



education (IFES). These institutions have a relevant social role, being responsible for the generation of knowledge and dissemination of information from learning environments (Cárdenas, López, & Landeros, 2017). According to the study by Michener *et al.* (2021), education is the most evaluated topic when it comes to analyses of government transparency processes.

Despite the productive capacity of IFES, especially in the areas of research and development, there is still a shortage of studies in the educational field (Gama & Rodrigues, 2016; Zorzal & Rodrigues, 2015; Zubcoff *et al.*, 2016). Taking into account the existing legal provisions, the relevance of IFES in the creation of a culture of transparency and the need for further studies in this area, the following question arose: in the context of transparency and citizen participation addressed by societal management and open government, regarding access to information, what are the topics of collective interest in IFES?

The identification of these themes is important to achieve the effectiveness of the public management of these entities and the ratification of social participation in the institutional dynamics. Thus, the present research aimed to identify which topics of collective interest in IFES for the due fulfillment of active transparency, and was structured in order to investigate the interaction between organizational models, open government and its initiatives.

This article is structured in five sections from this introduction. In section 2 the theoretical framework that supported the research is presented and in section 3 the methodological procedures followed to achieve the intent of the work are presented. In section 4 the results achieved are presented and in section 5 the final reflections are made and suggestions for future research are presented.

2 THEORETICAL REFERENCE

The State and the public administration have experienced several transformations, with a gradual convergence towards a welfare state, with the public administration moving towards a social and participatory management (Bresser-Pereira, 2017; Paula Paes, 2005; Paludo, 2017). Despite the existing vagueness in the concept of democracy and its application (Bauman & Bordoni, 2016), Bresser-Pereira (2017, p. 148) considers that "democracy, social state and managerial reform are dialectically interrelated institutions to the extent that they reinforce themselves." But one of the main challenges of public management lies precisely in the democratization of the decision-making processes inherent to the formulations of public policies (Milani, 2008).

The participation of society in the decision-making of public administration is one of the claims of citizens, dating mainly between the 1960s and 1970s, when it awakened an awareness of active citizenship (Gohn, 2008), which viewed the actions of public administration as an obstacle to progress and not as a way to meet public demands (Denhardt & Denhardt, 1979). This position generated a



need for administrative reform in public management (Paes de Paula, 2005; Secchi, 2009), which has been unfolding over the past two decades.

According to de Blasio and Sorice (2017), there was a convergence of organizational models experienced in several countries; for example, the New Public Management *was disseminated around the world, mainly in the United States and United Kingdom, between the 1970s and 1980s, losing strength between the years 1990 and 2000, from the proposition of other models such as the New Public Service, Digital Era Governance, New Public Governance and Collaborative Governance*, among others. In Brazil, this process has been occurring gradually, and it is common to find characteristics of the most diverse organizational models in public bodies and entities (Secchi, 2009).

Paes de Paula (2005) identified that public management in Brazil has been changing from a managerialist management, focused on efficiency and effectiveness, to a more participatory management, in which the demands of the target audience of each entity are taken into account for decision making. This direction is fundamental to achieve the effectiveness of public management, as it encourages public managers to optimize the application of resources in policies that truly meet social demand (Catelli & Santos, 2004).

In the world as a whole, public agencies and entities are seeking to redefine their relationship with citizens through open government initiatives (Gascó, 2015). Corroborating the discourse of transparency, social participation and collaboration in public management, Barack Obama issued in 2009 a memorandum addressed to the heads of government departments and agencies in which he reinforced his commitment to make the American government more open (OG) (White House, 2009). Denhardt and Denhardt (2015) further state that this commitment made by Obama to open government has led the citizen to a new era of access to information through the use of the Internet.

The concept of open government proposed by Agune, Gregorio Filho and Bolliger (2010) is the practice of making available, by electronic means, non-confidential government information and data, so that society can use them freely. However, open government is not restricted to the transparency of information, but above all to the transformation of a representative democracy into a collaborative democracy, where citizens participate in the decision-making process (Calderón & Lorenzo, 2010). That is why there are several initiatives that underpin representative democracy, such as participatory budgeting and deliberative research, initiatives that legitimize its existence, however, are not enough, since a more active and massive participation of citizens is desirable (Blasio & Sorice, 2017), thus generating a more collaborative democracy.

For the Organization for Economic Cooperation and Development [OECD] (2017), the practices of open government result in political benefits and build trust with citizens, as their proper application generates greater integrity of the public sector, anti-corruption measures, innovation in the public sector, civil liberties and e-government, among others. In addition, the purpose of open



government is to promote the transparency of public management through the provision of information to the citizen, mitigating corruption and promoting new instruments that legitimize democracy through social participation (OGP, 2023).

Cavalcanti, Damasceno and Souza Neto (2013) identified that the increase in social participation in public management has generated an increase in the demand for information, which in turn is an essential factor and serves to increase its performance. Among the factors that motivate society to seek participation are: lack of credibility that the current democracy has represented; political neglect of social demands; the need for the renewal of government-society relations; and increased political representativeness of social demands (Milani, 2008), in short, political factors have increasingly lost their credibility (Blasio & Sorice, 2017).

In this context, public management has been working on the implementation of initiatives that generate greater openness of data, with several countries carrying out initiatives that generate increased public transparency and the creation of mechanisms for the participation of society in public management, with open government being one of these initiatives (Dawes, Vídiasova, & Parkhimovich, 2016; Zorzal & Rodrigues, 2015).

Although the United States follows the convergences of organizational models, the process of openness of information and public transparency occurred regardless. Prior to these changes, in 1946 the Federal Register was created, through which basic information about the organizational structure of federal entities was disclosed; in 1966 the Freedom of Information Act was enacted, which allows citizens to request information about government actions (Gant & Turner-Lee, 2011). The authors clarify that despite the legal provision, the information was incomplete, because there was a limitation in its access. Thus, the memorandum issued in 2009 by Obama made this governmental opening broader, thus popularizing the term open government (Gascó, 2015).

Sharing this movement, which fosters social participation through greater information sharing, greater transparency and, above all, for the fulfillment of the constitutional prerogatives linked to these factors, the Brazilian federal government has operated through initiatives that agree with this commitment, as set forth in Table 1.

Along the same lines, higher education institutions (HEIs) stand out in terms of their potential for implementing open government actions, and can stimulate social participation in activities aimed at the creation of new content and platforms, by stimulating research and development, designing new processes and tools for open government platforms (Gant & Turner-Lee, 2011). Cárdenas *et al.* (2017) corroborate this idea, as they visualize these institutions as responsible for the creation of learning environments and access to new information and communication technologies (ICT), generating knowledge and information, primordial goods for economic, social, educational and scientific development.



The use of ICTs by HEIs is totally appropriate, especially for its potential to collect and organize information effectively (Silva & Portugal, 2016), facilitating their sharing (Macadar *et al.*, 2015). Public HEIs, in addition to participating in this context, are part of the governmental universe, in which the relevant social role of these institutions must be taken into account, since their transparency initiatives favor social protagonism (Gama & Rodrigues, 2016).

Zorzal and Rodrigues (2015) identified that the Brazilian public sector, and more specifically the educational sector, has a great lack of studies on the amount of information made available. This lack of studies needs to be converted, especially because current legislation and manuals suggest the opening of information and data that do not meet the dynamism of HEIs (Zubcoff *et al.*, 2016).

Gama and Rodrigues (2016) highlight the existence of a great demand for information in Brazilian IFES. These institutions are included among the municipalities and public foundations (Gama & Rodrigues, 2016) and must comply with the legal prerogatives, in which we highlight those related to access to information (Decree n. 7724, 2012).

Law 12,527/2011, regulated by Decree 7,724/2012, provides for the obligation of Brazilian bodies and entities to give access to information to civil society, not only passively, but above all actively (Decree No. 7724, 2012; Law No. 12527, 2011). For Macadar *et al.* (2015), the LAI was an important milestone for the relationship between the government and the user, as it raised the level of transparency, in which advertising became the rule and secrecy the exception. Decree 7.724/2012 names this action of active transparency (Decree n. 7724, 2012, online), in which the organs and entities must disclose useful information related to their daily activities and that is not confidential without the need for the request of the users of their services (Alves *et al.*, 2021)

Table 1 - Initiatives of the Brazilian federal government

Year	Act	Description
2004	Federal Government Transparency Portal	Channel that allows the user to monitor and supervise the application of the financial resources of the federal government. It aims to increase the transparency of public management.
2009	Decree 6.932 of August 11, 2009	It provides for the simplification of the public service provided to the citizen, ratifies the waiver of notarization in documents produced in Brazil, establishes the "Charter of Services to the Citizen" and gives other measures.
2010	Daily update of the data available on the Federal Government's Transparency Portal	Modification in the Transparency Portal that now provides the information with daily updates.
2011	Decree 13.117 of September 15, 2011	Establishes the National Action Plan on Open Government and provides other measures;
2011	Brazil's participation in the OGP initiative	The Open Government Partnership (OGP) is an international initiative launched on September 20, 2011 to which Brazil has been a signatory since its foundation. It aims to help national and subnational governments commit to the proper application of the principles of open government.
2011	Law 12.527 of November 18, 2011 Access to Information Law (LAI)	Regulates access to information provided for in item XXXIII of article 5, in item II of paragraph 3 of article 37 and in paragraph 2 of article 216 of the Federal Constitution; amends Law No. 8,112, of December 11, 1990;



		repeals Law No. 11,111, of May 5, 2005, and provisions of Law No. 8,159, of January 8, 1991; and makes other arrangements.
2012	Decree 7.724 of May 16, 2012	Regulates Law No. 12,527, of November 18, 2011, which provides for access to information provided for in item XXXIII of the caput of article 5, in item II of paragraph 3 of article 37 and in paragraph 2 of article 216 of the Constitution.
2014	Decree 8.243 of May 23, 2014	Establishes the National Policy of Social Participation - PNPS and the National System of Social Participation - SNPS, and gives other measures.
2016	Decree 8.777, of May 11, 2016	Establishes the Open Data Policy of the Federal Executive Branch.
2017	Law 13.460 of June 26, 2017	It provides for the participation, protection and defense of the rights of the user of the public services of the public administration.
2017	Decree 9.094 of July 17, 2017	It provides for the simplification of the service provided to users of public services, ratifies the waiver of notarization and authentication in documents produced in the country and establishes the Charter of Services to the User.
2021	Law 14.129 of March 29, 2021	Provides for principles, rules and instruments for Digital Government and for the increase of public efficiency and amends Law No. 7,116, of August 29, 1983, Law No. 12,527, of November 18, 2011 (Access to Information Law), Law No. 12,682, of July 9, 2012, and Law No. 13,460, of June 26, 2017.
2022	Law 14.345 of May 24, 2022	Amends Laws No. 12,527, of November 18, 2011 (Access to Information Law), and 13,019, of July 31, 2014 (Regulatory Framework of Civil Society Organizations), to ensure full access to information related to partnerships between the Public Administration and civil society organizations, as well as to ensure former mayors and former governors access to the records of agreements entered into during their management in a system maintained by the Union.

Source: Own elaboration

The legislation brings, as an example, some information that must be contained in the electronic sites (Law n. 12527, 2011), however, several studies show that there is no attendance to this condition (Almeida & Freire, 2015; Belinski, 2017; Cavalcanti *et al.*, 2013; Mosque, 2014; Ventura, Siebra, & Fell, 2013).

Many authors argue that despite the existing benefits in providing government data and information, there are still many barriers to be overcome, thus justifying the difficulty in meeting some initiatives (Albano & Pinho, 2016; Alves, *et al.* 2021, Gant & Turner-Lee, 2011; Janssen, Charalabidis, & Zuiderwijk, 2012).

3 METHODOLOGICAL PROCEDURES

The present study aimed to identify the topics of collective interest to be addressed by the websites of HEIs. To this end, a documentary research was carried out to list the most relevant topics of collective interest from federal government publications; and a systematic mapping study (EMS) to enhance the initial results and identify how research addresses this theme.

The objective and the collection techniques corroborated the characterization of the research as descriptive, since the investigation sought to describe how the Brazilian literature and legislation have reported this phenomenon (Cooper, Schindler, & Sun, 2006; Kothari, 2004). The approach used in the



research was qualitative, since the subjectivity of the researchers was part of the process, given their reflections and interpretations about the research process (Flick, 2014).

For Mogalakwe (2006), documentary research is a method of great relevance for social research that uses documentary sources as data for analysis. The documentary perspective of the present research occurred from the reading and interpretation of two publications available on the official *website* of access to information (<https://www.gov.br/acessoainformacao/pt-br>).

The objective was to identify general topics in which Brazilian public federal agencies and entities are obliged to provide on their websites regardless of requests. Thus, the publications named "application of the law of access to information in the federal public administration" and "guide of active transparency for organs and entities of the federal executive branch" (CGU, 2019; 2022) were analyzed.

The EMS is considered one of the forms of automated literature review that aims to evaluate and interpret as much research on a given thematic area or phenomenon of interest, or even a broad and exploratory issue (Davis, Dieste, Hickey, Juristo, & Moreno 2006), differentiating itself from the conventional systematic review, which focuses on relational and causal issues (Kitchenham & Charters, 2007; Petersen, Feldt, Mujtaba, Mattsson & 2008).

Due to the subjectivity existing in qualitative research, Skovdal and Cornish (2015) suggest that the techniques used have a greater rigor to mitigate any type of bias. Thus, for the conception of the EMS, a team of three researchers was constituted, one of them being the coordinator of the process, supervising and validating the results. Additionally, the Start tool was used¹ to systematize the study, a tool that helps systematic reviews, a methodology that usually requires a lot of time (Fabbri, *et al.* 2016), and its use optimized the entire process.

4 DISCUSSION AND RESULTS

In this section the main results of the data collection, documentary research and systematic mapping study will be presented.

4.1 DOCUMENTARY RESEARCH

The documents analyzed were published in 2019 and 2022, respectively, with the first being in the 4th edition and the second being in the 7th edition. The publications analyzed reported the best practices and presented suggestions for the implementation of the main current legislations, namely: Law 12,527/2011, Decree 7,724/2012, Decree No. 8,777/2016, Decree 9,094/2017 and Law 14,129/2021.

¹Available in: <http://lapes.dc.ufscar.br/tools/start_tool>.



Although these laws directly portray the forms of access to information and the disclosure of open government data, we verify in these documents that there are other laws that regulate various subjects, however, they cover obligations of active disclosure of certain information. Thus, the idea that the aforementioned law and its regulatory decree portray only an illustrative list of active transparency is ratified (Decree n. 7724, 2012; Law No. 12527, 2011).

Regarding the publications of the *official website* of access to information, the first document addressed all aspects of the first four aforementioned legislations, offering citizens and public management subsidies for a complete application of the legislation. The second suggested a standard for the active transparency of the websites of the agencies and entities linked to the federal executive branch, thus facilitating the gathering of information by users.

Both publications addressed the main points that should be mandatorily included in the electronic sites, since the legislation contains legal provisions that oblige Brazilian government agencies and entities to disclose information regardless of requests. This obligation was recommended in Law 12,527/2011 and Decree 7,724/2012, and was named active transparency (Decree No. 7724, 2012; Law No. 12527, 2011). The Active Transparency Guide summarized in 14 points the main thematic axes of mandatory disclosure and their respective legal basis.

In addition to addressing the main points, guidelines and what is the legal basis for compliance with active transparency, the documents analyzed in this research bring recommendations for good practices on how to present these data. It is not a requirement to comply with the *layouts*, but rather a standardized suggestion that aims to facilitate the visualization and understanding of users.

For some authors, Brazil meets some points of the legislation, however, they agree among themselves that significant improvements are necessary for an effective attendance of active transparency (Alves *et al.*, 2021; Baldissera *et al.* 2021; Michener *et al.*, 2021; Silva *et al.*, 2020).

4.2 SYSTEMATIC MAPPING STUDY

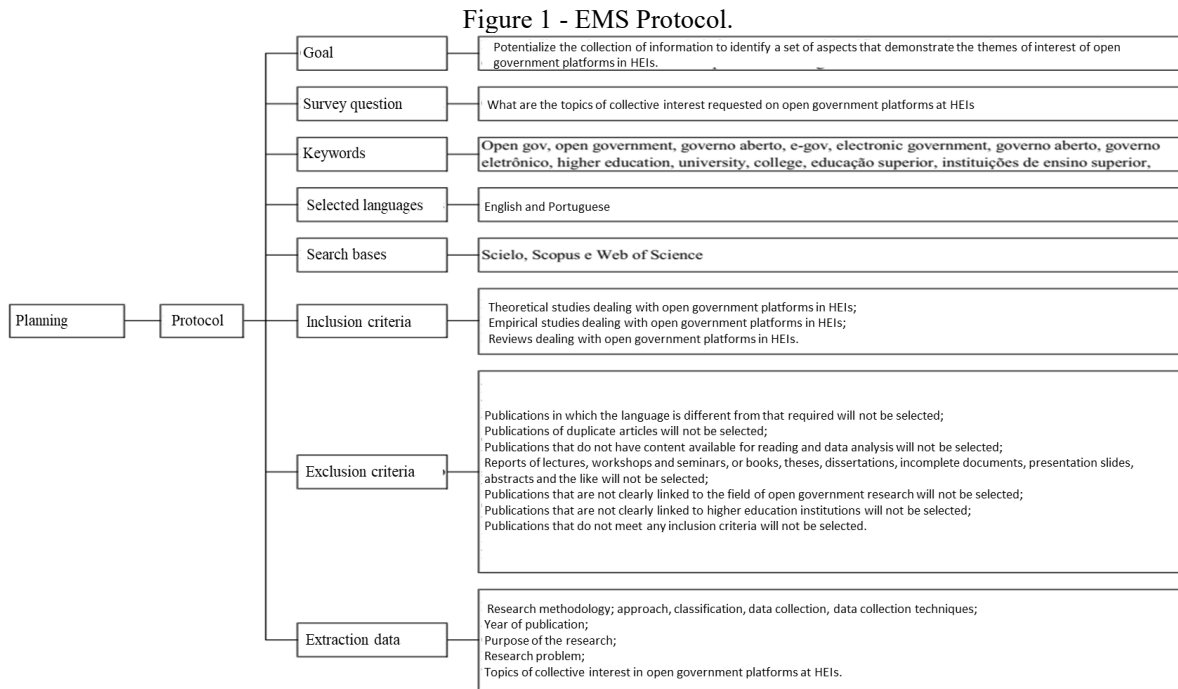
The EMS applied to this research sought a greater deepening and approximation of the open government phenomenon, as well as the enhancement of data collection, through research in the main *journals* that investigate the objective of users of open government platforms in IFES, aiming to identify a set of aspects that demonstrate the fundamental elements and of collective interest in these platforms. The EMS occurred between November 2022 and March 2023, starting with the search phase, which returned 335 studies.

The studies were submitted to the selection and extraction phases for further analysis, through the export of the studies to the Start tool, as proposed in the methodology.

The use of Start was extremely important to optimize the results found in the EMS, in which the contribution of Fabbri *et al.* (2016) provided a greater understanding for its application. This tool



is divided into planning, execution, and summarizing. The planning phase allows the establishment of a research protocol, which was developed by the team of the present study, and which is described in Figure 1.



Source: Own elaboration

The second phase (execution) is subdivided into three parts: identification of studies, selection and extraction. The identification of the studies results from the exploration of the databases selected in the initial protocol, when some data from the articles found according to the defined search string are exported to the tool . The most relevant data for this study that were exported are: title, year of publication, abstract, authors and keywords.

The files exported from the Scopus and Web of Science databases brought basically all the aforementioned information; the Scielo database returned all the titles and authors misconfigured and without presenting the abstracts and keywords. Thus, for this base, it was possible to manually correct the titles, authors, inclusion of the respective abstracts and keywords. The *search strings* used in the study are presented in Table 2.



Table 2 - *Search strings* used in EMS databases

Bases	String
Scielo	((open gov) OR (open government) OR (electronic government) OR (e-gov) OR (governo aberto) OR (governo eletrônico)) AND ((higher education) OR (university) OR (college) OR (educação superior) OR (instituições de ensino superior) OR (ensino superior))
Scopus	(("open gov" OR "open government" OR "electronic government" OR "e-gov" OR "governo aberto" OR "governo eletrônico") AND ("higher education" OR "university" OR "college" OR "educação superior" OR "instituições de ensino superior" OR "ensino superior"))
Web of Science	(("open gov" OR "open government" OR "electronic government" OR "e-gov" OR "governo aberto" OR "governo eletrônico") AND ("higher education" OR "university" OR "college" OR "educação superior" OR "instituições de ensino superior" OR "ensino superior"))

Source: Own elaboration

The search returned 79 (24%) studies in the Scielo database, 187 (56%) in Scopus and 69 (21%) in the Web of Science, totaling 335, of which 46 of them were duplicates, that is, they were in more than one searched database. Thus, in the later phases there were only 289 studies that would be analyzed, accepted or rejected, according to criteria established by the team.

Thus, the selection phase was initiated, which was subdivided into the following stages: the first evaluated the studies based on the reading of the abstract, keywords and title of the studies returned by *the defined search string*; and the second involved the classification with the inclusion and exclusion criteria from the complete reading of the articles. The first stage sought to identify whether the articles really dealt with the theme "open government", directly or indirectly, and whether the field of application of the study occurred in HEIs. The EMS considered all HEIs, and not only those of Union competence, since in several countries HEIs are not necessarily federal, but may be the competence of other entities. Due to the legal nature of the Brazilian IFES, studies were also considered where the field of application were governmental entities, or if there was not enough information about the field of application. This decision was based on the need to apply the second stage of the selection, which consisted of a thorough reading of the entire article, thus making it possible to identify the real field of application of the study. It is noteworthy that the lack of clarity of some abstracts forced the group to accept these studies in the first stage, since in the later stage, a careful and complete reading of the studies would provide greater certainty in their acceptance or refusal.

In the first stage, 224 articles were rejected and 65 were accepted; and in the second stage, from the careful reading of the 65 articles initially accepted and after the classification of the inclusion and exclusion criteria, 12 articles were accepted and 53 refused.

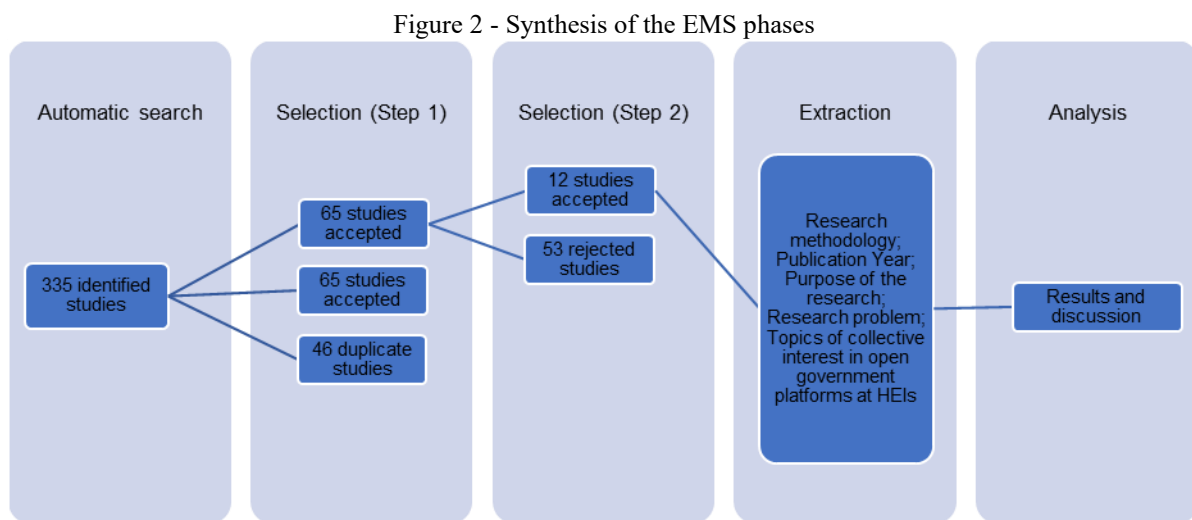
The extraction stage occurred simultaneously with the selection stage (step 2), since the 12 studies that were accepted had the data extracted at the time of the complete reading of the studies, as exposed in the planning protocol. In this phase, studies that had at least one exclusion criterion were rejected, even if they had inclusion criteria.

The EMS identified that all accepted studies were empirical, one of them being empirically and theoretically based; in the rejected studies, the main exclusion criteria were the field of research not being HEI, the unavailability of the study for *download*, and not meeting the inclusion criteria. It happens that many studies dealt with tools or characteristics of open government, such as e-



government and/or the use of ICT and open data, but did not link them to open government, or to its principles addressed by the OGP (2023), causing them to be rejected. Additionally, HEIs were not the field of application of most studies, corroborating the literature that demonstrates a lack of studies in this type of entity (Gama & Rodrigues, 2016; Zorzal & Rodrigues, 2015; Zubcoff *et al.*, 2016).

The increase of studies directed to HEIs is necessary, having as main foundation the exploration of the theme of open government (Cavalcanti *et al.*, 2013), considering its complexity and idiosyncrasies, as well as its ability to promote actions that generate social and economic impact from the reuse of information and data provided by these institutions (Zubcoff *et al.*, 2016). Figure 2 summarizes the phases and processes performed in the EMS.



Source: Own elaboration

It is possible to observe in Figure 2 all the steps and processes carried out in the EMS, from the search of the publications in the databases to the final process of analysis of the results and discussion.

There was a need for interpretation and subjective analysis of the studies that brought the information to be extracted tacitly, since all the information was not evident. From the studies that had sufficient information, the following information was extracted:

- 1) Methodological approach applied: 33.3% (4/12) quantitative, 41.7% qualitative (5/12) and 8.3% (1/12) mixed. It was possible to observe that two articles were review (16.7%), with no applied research methodology;
- 2) Research classification: 75% descriptive (9/12), 16.7% exploratory (2/12) and 8.3% (1/12) exploratory and descriptive;
- 3) Data collection: 16.7% (2/12) bibliographic and documentary research, 25% (3/12) bibliographic research, documentary and case study, 8.3% (1/12) bibliographical research and case study, 16.7% (2/12) only bibliographical research, 8.3% (1/12) only documentary research and 25% (3/12) only case study;



- 4) Objective: the most frequent objectives were the evaluations of the portals regarding access to information and open data, the benefits and barriers in the implementation of open data;
- 5) Research problem: among the problems found are the lack of application of the principles of open government, specifically access to information and openness of government data, the lack of publications on this theme applied in HEIs, and the need to evaluate open government initiatives evidenced not only their benefits, but also the barriers to their implementation and possible negative impacts. The difficulty in implementation and its respective barriers is something common in the literature (Albano & Pinho, 2016; Gant & Turner-Lee, 2011; Janssen *et al.*, 2012), and the EMS demonstrated that addressing this theme has been a research objective;
- 6) Topics of collective interest: only three studies mentioned relevant themes for the application of active transparency in HEIs. The themes identified are: education, administration and finance; information of the servers and their functional activities, scholarships (students), allocation of places in courses, use of institutional resources (vehicles, Internet, etc.); and accounting information.

Table 3 lists the studies that reached the final phase and had their data extracted. In general, most of them have information in the title and/or keywords that ratify their acceptance within all the criteria previously established in the protocol. In addition, it was possible to verify that the years of publication were after 2009, the year in which Obama managed to popularize the term open government (Gascó, 2015; White House, 2009); and 2011, the year in which the international initiative called *Open Government Partnership* (OGP, 2023) emerged.

The main objective of the EMS carried out in this research was to identify the topics of collective interest in open government platforms in HEIs. Thus, the themes identified in the EMS may serve for IFES to comply with the Brazilian legislation that establishes as a duty of the organs and entities the application of an active transparency, especially feeding users with information of collective interest (Decree n. 7724, 2012; Law No. 12527, 2011).



Table 3 - Studies in which data were extracted

Title / Periodical	Year	Keywords
A research agenda for evaluating open government initiatives / ECIS 2013 - Proceedings of the 21st European Conference on Information Systems	2013	Evaluation; Open government; Research agenda; Strategy
Observance of the law of access to information by the federal authorities of Brazil / Perspectives in Information Science	2013	Electronic government; Open government; Access to Information Law; Federal authorities
Open Data Portals in Africa: An Analysis of Open Government Data Initiatives / African Journal of Library Archives and Information Science	2016	Data portal; Open data; Visual data; Data formats; 5 Star of open data
Publishing Data in Open Format: Formalizing the Process in a Brazilian Federal University / 9th International Conference on Theory and Practice of Electronic Governance (icegov 2016)	2016	Benefits; Barriers; Federal university; Open government data
The university as an open data ecosystem / International Journal of Design and Nature and Ecodynamics	2016	IT ecosystem; Open data; Open government
Transparency and access to information: a study of the demand for accounting information in Brazilian federal universities / Transinformation	2016	Access to information; Accounting information; Public information; Transparency; Federal public universities
Viscous Open Data: The Roles of Intermediaries in an Open Data Ecosystem / Information Technology for Development	2016	Open data; Ecosystem; Intermediary; Governance; University; Higher education; South Africa
Implementation of open data in higher education: A review / Journal of Engineering Science and Technology	2018	Data openness; Higher education; Open data; Open data developing country; Ten principles
Expanding the actions of Open Government in higher education sector: From web transparency to Open Science /. PLoS ONE	2020	Article; Education; Funding; Government; Human; Human Experiment; Social Participation
Open data and open science: How brazilian federal universities present themselves in this horizon / Biblios	2020	Electronic Government; Open Data; Open Science; Public Institution of Higher Education
Applying the Open Government Principles to the University's Strategic Planning: A Sound Practice / Sustainability	2020	Open Government; Technological Innovation; Sustainable Strategic management; Stakeholders Approach; Higher Education Institutions
Saudi scholars' perceptions and use of open government data portals at Shaqra University, Saudi Arabia / IFLA Journal - International Federation of Library Associations	2021	Open data; Data portals; Data sharing; Open Data Portals; Saudi researchers; Shaqra University

Source: Research data

Among the themes identified, some are already in the illustrative list that the legislation recommends on active transparency, they are: general information about administration, finance, accounting and organizational structure (Decree n. 7724, 2012; Law No. 12527, 2011). In addition to the mandatory themes, we highlight those that presented a higher degree of specificity, which were: scholarships, allocation of vacancies in course and use of institutional resources. These themes can give a greater direction in the application of the active transparency of the HEIs, since they are not as broad as the theme of education, which was also a theme captured by the EMS, but develops in several areas.

Corroborating the study by Silva *et al.* (2020), in which the authors analyzed the practices of transparency in the governance theme in 63 federal universities in Brazil, it is understood that the IFES do not yet present an adequate level of transparency. It is imperative to understand that transparency



practices do not merely serve to comply with legislation, but above all to increase social participation, present the services provided and their relationship with revenues and expenses, enhance democracy and comply with the consolidation of societal management. Leite and Lira (2023) indicate that there are several factors that influence public management to apply transparency. This application corroborates the understanding that transparency does not apply only for the purpose of complying with the legislation.

5 FINAL CONSIDERATIONS

Open government initiatives are being disseminated around the world (Gascó, 2015) and more and more countries are adhering to this commitment to transparency, citizen participation in government decisions, use of ICT and *accountability* (OGP, 2023). And these initiatives corroborate for an administrative reform in public management that has directed its efforts to the fulfillment of a more societal management (Paes de Paula; 2005; Secchi, 2009).

Brazil has been a signatory of the OGP since its launch in 2011 and has been making commitments to apply a more efficient management and involved with citizen participation. Applying the LAI generates transparency and democratizes information, improving the relationship between the citizen and the government (Macadar *et al.*, 2015). Baldissera *et al.* (2021) stresses that access to information is one of the great characteristics of democratic governments. Among the various Brazilian government agencies and entities, the IFES stand out, which by its capacity in generating knowledge and efforts in the area of research, design of new technological solutions, can contribute to increase the effectiveness of public management (Gant & Turner-Lee, 2011).

The legislation provides that government agencies and entities must act proactively regarding the spontaneous disclosure of information to society. The content of this information should be in accordance with the interest of the users and the end activities of the institution. Some themes were identified both in the legislation and in the EMS that should be highlighted on the IFES websites, however, the lack of studies in this area, already addressed previously, made it difficult to obtain more results.

As questions for future research are: what are the most addressed topics on the IFES websites? What criteria do these institutions use to identify topics of collective interest? Do IFES comply with the legislation regarding the fulfillment of active transparency? Thus, it is considered the need for the continuity of research aimed at identifying the most relevant themes in IFES, so that there is greater effectiveness in the dissemination of information and openness of government data by these institutions, thus generating greater possibilities in the participation of society in public management.



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