RESEARCH ARTICLE

The use of Capes periodic portals by researchers in a graduate program case study at a federal institution of higher education

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ABSTRACT
The paper discusses the factors that influence the use of the Journal Portal of the Coordination for the Improvement of Higher Education Personnel by the faculty of a Postgraduate Program in the field of applied social sciences at the Federal University of Bahia, identifying the current phase of the process institutionalizing the use of the tool as an instrument of access to information. It results from a qualitative descriptive study, based on literature review and direct non-participant observation. It aims to analyze how intraorganizational factors influence the use of the Journal Portal. Based on the studies of Pamela Tolber and Richard Hall, the text refers to the reflection of how organizational factors can influence the adoption of the information system. The results found indicate that the institutionalization process has not reached its fullness and point to a need to improve the organizational processes so that the use of the tool is consolidated in the Program.

KEYWORDS

RESUMO
O trabalho discute os fatores que influenciam o uso do Portal de Periódicos da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior pelo corpo docente de um Programa de Pós-Graduação na área das ciências sociais aplicadas da Universidade Federal da Bahia, identificando a fase atual do processo de institucionalização do uso da ferramenta, como instrumento de acesso à informação. Resulta de um estudo descritivo de natureza qualitativa, com base em revisão da literatura e observação direta não-participante. Objetiva analisar como os fatores intraorganizacionais influenciam o uso do Portal de Periódicos. Baseado nos estudos de Pamela Tolber e Richard Hall, o texto remete à reflexão de como os fatores organizacionais podem influenciar na adoção do sistema informativo. Os resultados encontrados indicam que o processo de institucionalização não atingiu sua plenitude e apontam para uma necessidade de aprimorar os processos organizacionais para que o uso da ferramenta seja sedimentado no Programa.

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INTRODUCTION

Research in Brazilian postgraduate studies has nuances in the search for knowledge, in different contexts and dynamics, which leads to a critical look at aesthetics and the multiple possibilities of meaning of a phenomenon (MELLO, 2014). A perception based on objectivity, structuring, and interpretations based on values, attributes, uses, and values of an alleged common basis are characteristic of the so-called "natural sciences". The “universal” value attributed to practices, or the resources associated with them, take into account the “rules” designated by the community and are subject to decoding. Understanding that interpretations of practices in this context evoke an analysis of internal and external aspects to structures and those incorporated by individuals, but which is not unanimous among users and scientific fields (PINUDO, 2013), this work investigates variations in the reality of the use of a research tool, the Portal of Journals of the Coordination for the Improvement of Higher Education Personnel (Capes), in the area of applied social sciences.

Since its creation in 2000, Portal de Periódicos collection has been significantly expanded, aiming to meet the demands of Brazilian graduate courses and has become one of the main mechanisms for updating the academic community concerning national and foreign scientific production. The Portal is considered as one of the most important mechanisms of access to scientific and technological literature offered to Brazilian graduate programs, having the greatest reach, compared to other international initiatives (PORTAL …, 2020).

Although it represents an indispensable resource for research, few works deal with the Capes Portal from the perspective of institutionalizing the use of the tool. This research aims to address a gap in scientific production, based on the assumption that the institutionalization process has not reached its fullness. The objective of the research is to analyze how the intra organizational factors influence the use of the Capes Journal Portal by professors of a Graduate Program at the Federal University of Bahia, in the area of applied social sciences. Unlike other investigations that aimed to evaluate usability, studies of uses and users, scientometrics, scientific communication, or the use of the tool by graduates from post-Graduation programs, this study discusses the existence of intra organizational factors that may influence the adoption of Portal by researchers, who tend to contribute to the formation of research habits.

Resistances and preferences regarding the use of technological art and effect are understood as a search for stabilization in the face of scalar transformations, sometimes disruptive, that shape the production process, making the habitualization process complex and slow. The challenge for social actors in the past yesterday is not only to adapt to the intense use of electronic devices but to learn how mutations, in breadth and depth, affect pre-existing social practices and behaviors (BERGER; LUCKMANN, 2014).

This research is based on the studies by Tolbert and Hall (2015), who propose a model for studying the stages of institutionalization, divided into three phases: habitualization, objectification, and sedimentation. The environment, socially constructed or institutionalized, is a process that occurs in an organization over time and reflects historical peculiarities, shaping the course of actions by social actors (DE PAULA, 2015). The organization/environment relationship reflects the underground processes of informal groups, intergroup conflicts, values, and the power structure of the local community (ENCARNAÇÃO, 2014; MACHADO-DA-SILVA et al., 2010).

In this context, this paper discusses how institutional dynamics are capable of altering the constitutive process of productive spaces, highlighting the relationship between intra organizational factors and the perception of organizational actors in a postgraduate program in the area of Applied Social Sciences at the Federal University of Bahia.
THEORETICAL REFERENCE

The foundations of an institutional model for interpreting organizations are the “structural expression of rational action” that, over time, are subject to pressures of the social environment and become organic systems (DE PAULA, 2015). The author defines this process as “institutionalization”, which corresponds to values that replace technical factors in determining organizational tasks.

For Encarnação (2014) from an institutional perspective, the environment represents not only the source and destination of material resources (technology, people, finance, raw materials) but also the source and destination of symbolic resources (social recognition and legitimation). In this context, the technical environment distances itself from the complexity of the socially constructed or institutionalized environment, being supported by different rationalities. A technical or “rational” environment is what allows the organization to be efficient, produce goods or services accepted by the market, and, thus, achieve its objectives.

The assessment of the institutional environment in a comprehensive manner allows a critical appreciation of shared understandings and norms. In this perspective, the institutional variables are investigated indirectly, understanding them implicitly and diffusely to the dynamics of interactions in the organizational space.

On the other hand, the analysis at the most immediate level, which is located at the moment of rational action - capable of providing legitimacy to procedures in the present and future of the organization -, enables the study of the impact of the environment on aspects of dependency, power and policies about organizational actors (SCOTT, 2013; MACHADO-DA-SILVA et al., 2010). The institutionalization process, therefore, has its own dynamics for each organization and depends on factors that influence it, being unique for each group of individuals. Tolbert and Hall (2015) highlight that the degree of institutionalization can be measured by assessing the levels of value sharing - acquired through experience - and resistance to change on the part of individuals.

Institutional elements can be cultural forms - norms and laws, expectations or typifications; social structures - systems of power, systems of authority or structural isomorphism; and routine activities - standardized procedures, compliance, or execution of action programs (SCOTT, 2013). The process of institutionalizing beliefs, normative, and cognitive values takes place at different levels, and different types of analysis are recommended. A model to explain the institutionalization process breaks it down into three stages: habitualization, objectification, and sedimentation (BERGER; LUCKMANN, 2014; TOLBERT; HAAL, 2015).

Habitualization, which can be classified as a pre-institutional stage, begins with the adoption of new structural arrangements. The organization adopts a new structure in response to specific organizational problems or sets of problems. At this stage, there is also the normalization of new structures for the organization's policies and procedures (TOLBERT; HALL, 2015).

Human action is subject to habit as it is often repeated, becoming a pattern that can be used again with effort saving (BERGER; LUCKMAN, 2014). Habit also generates psychological gain, as it limits the options available for carrying out a certain activity, avoiding reinterpretation, at all times, in the course of action.

The second phase of the process is objectification and involves the development of a consensus group among the organization's actors. This process can occur through two different mechanisms, although not necessarily disconnected: organizations can collect information directly from a variety of sources, or from a structure already tested in other clusters. This...
process minimizes the risks of adopting the structure, resulting from efforts to increase competitiveness or to recycle old social inventions. The structures that are in this stage are considered to be 'semi-institutionalized' (TOLBERT; HAAL, 2015).

Total institutionalization involves sedimentation, a process that is supported by the continuity of the structure and, especially, its survival, through generations of members of the organization. Thus, the process depends on the joint effects of low relative resistance by opposition groups, promotion, and ongoing cultural support by groups of supporters of this structure and the positive correlation with desired results. This stage can be considered as the stage at which practices acquire legitimacy.

The legitimation of practices involves scrutiny not only of formal processes, typified by predictable actions and authorized speeches, but, above all, for which it is outside the normative and, even so, they constitute the institution. Assuming this bias implies recognizing that institutionalization is not restricted to the scope of the organized and to formal processes of interaction. It requires looking beyond organized, apparently coherent manifestations, to pay attention to organizational dynamics, the processes that keep the organization out of balance, the state of uncertainty, and permanent disorganization/(re)organization (tensions, disputes, disturbances).

The relations between the macrosystem (social structure) and the microsystem (organization) constrain and are determined by a series of factors or variables, such as the valorization of the immediate, the urgency of decisions, the speed of information, the apparatus advanced technology, and measurement of processes, among others.

The variables are represented by social, political, and economic contexts, by culture, worldviews of the members in confluence with the current organizational culture, in which different cognitive behaviors and shared universes are mimicked. The investigation of the effect of the relational aspect in institutionalization allows the identification of varied interferences and conditioning of the different types of interactions in diverse social contexts (KUNSCH, 2010). Thus, it is valid to study the conformation of more participatory, flexible forms of interrelation, and the ability to combine varied interests with cultural, economic, and political conditions, in which the organizational actors are inserted and develop.

The process of adapting to changes leads to reflection on how to continuously transform productive production, considering that institutionalized norms, rules, and standards do not guarantee the reduction of uncertainty present in the social space. In other words, it acquiesces that the process of formation, deinstitutionalization, institutionalization, and reinstitutionalization oscillate dynamically, from order to disorder, from construction to deconstruction, in search of a stabilized or acceptable social standard (ABRUTYN; TURNER, 2011).

The study of the institutionalization process is, therefore, significant to understand the transformation of relationships in the organization, especially when it occurs in a collaborative way to strengthen ties and develop the institutionalized image. As a result of this differentiation, vertical relationships are established, which follow the line of authority, and horizontal relationships, which run through the existing productive or managerial process at the same hierarchical level, giving rise to a division of roles and functions between the organizational actor.

METHOD

The research results from an exploratory study of a qualitative nature. The investigation perceives theoretical and empirical research techniques, focused on the study of
ways to structure the discourse, the involvement of tacit knowledge, and instrumental resources. The methodological procedure applied is a single case study, as the phenomenon is investigated in a unique context. According to Yin (2015), it is an empirical study that investigates a current phenomenon within its context of reality and can be used in both exploratory and descriptive research. The research started from the assumption that the process of institutionalizing the use of the Portal has not reached its completion within the Program. The research universe consists of 31 scholars of the permanent staff, plus seven collaborating professors. Only the faculty of the permanent staff were considered, and those who were not retired at the time of the research.

Eight professors in the sample were selected with the proposal to diversify the age group, gender, and length of stay in the Program, in relation to research groups, and active profile of publications in the 2017-2018 biennium. Direct non-participant observation, document analysis, and semi-structured interviews were used in the investigation. The individual, structured, and non-participant observation was used to verify the routine of the participants in the workspace and their use of the Portal. The selection criteria for the participants took into account the position/level in the university career. Taking this into account, the selected scholars were: one Adjunct Professor I, two Adjunct Professors II, one Adjunct Professor III, two Adjunct Professors IV, one Associate Professor II, and one Titular Professor. Four of them were professors with Exclusive Dedication (DE), and all were doctorate holders. The number of surveyed and the absence of the student body resulted from the lack of resources to expand the study. The interviewees were approached individually, in a reserved environment at the workplace, and asked about the frequency and form of use of the Capes Portal.

As for the data collection technique, semi-structured interviews were used, which according to Trivinos (2013, p. 145) “[...] is one of the main means that the researcher has to carry out data collection”, it favors not only the description of social phenomena but also their explanation and understanding of their totality. The interview script consisted of three axes, considered relevant for the moment of analysis and discussion of the results and achievement of the objectives proposed by the study: participant profile, academic production, and use of Capes Portal. Three categories were listed for data analysis: a) Use of the Capes Portal by professors of the Postgraduate Program (Habitualization process), b) Intra organizational factors that may interfere with the use of the Portal, and, c) Facilities and difficulties of use of the Portal in the opinion of the professors.

For data analysis, we used the content analysis method, based on the line of thought of Bardin (2011). Content analysis was used for data treatment, and to identify consistencies and central meanings in data acquired through non-participatory observation, documents, and semi-structured interviews considering the subjective realities of the perceived behaviors.

In the analysis of the testimonies, attention was paid to the convergence or divergence of meanings of all those involved in the research, revealing the essence, which is immutable, particular, and constant in the studied phenomenon. The speeches evidenced by the actors gave rise to categories of analysis. The convergence of meanings made it possible to identify the accidental qualities of the essential ones and to dissociate the independent meanings from those shared by the participants. The divergence, perceived in what he did in the speech of one participant to another - be it due to non-verbalization or imprecision in the report -, elucidated implicit meanings and led to inference by researchers, based on evidence, not on mere uncritical assumptions. The definition of the categories took into account words with similar meanings, in addition to measuring the frequency of their use. Then, we proceeded to the classification as to frequency, which led to the establishment of titles for the surveyed dimensions.

To maintain the authenticity in the transcription of the collected data, using the audio resource (recording) for transcription in textual support, the verbatim 'word for word'
transcription technique was used for all interviews, for both the model of conventions for transcription adopted by Costa (2011) was adopted

RESULTS

For this study, interviews were conducted with eight professors from the Graduate Program, three of whom were women and five, men. Participants' ages ranged from 38 to 65 years, as shown in Chart 1.

Frame 1. Participating Scholars

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Years of lecturing</th>
<th>Years in the program</th>
<th>Years in the program</th>
<th>Years in the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewee 1 (I1)</td>
<td>62</td>
<td>27</td>
<td>7</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Interviewee 2 (I2)</td>
<td>47</td>
<td>19</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Interviewee 3 (I3)</td>
<td>50</td>
<td>23</td>
<td>5</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Interviewee 4 (I4)</td>
<td>41</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Interviewee 5 (I5)</td>
<td>46</td>
<td>17</td>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Interviewee 6 (I6)</td>
<td>65</td>
<td>42</td>
<td>27</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Interviewee 7 (I7)</td>
<td>39</td>
<td>10</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Interviewee 8 (I8)</td>
<td>28</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: field research

The characterization of the interviewees was based on the assumption of a direct influence relationship between age, experience, and scientific production. Thus, it was expected that a more experienced researcher would have more publications, in the case of a stricto sensu program with a score of 4, awarded by CAPES. It is considered that researchers at the beginning of their careers are more likely/open to learn and use technological instruments, as is the case with the Portal, to professionals with more time in the program.

The first category analyzed corresponds to the identification of the interviewees' profile and the way to use the Capes Portal. None of the interviewees received training or guidance on how to use the Portal or any other search engine. When asked about the resources offered by Portal Capes, the participants said that the use of tools to refine the recovered results, or the search, selecting available editors, does not add value to the research. Regarding the volume of information retrieved in the surveys, as an important factor for the use of the Portal, the lack of familiarity prevents some interviewees from better evaluating the tool.

Regarding the frequency of use of the Portal, two interviewees - I5 and I7 - said they used it when starting an investigation.

I indicate the base of Capes Periodicals, possibly other bases that have in the conference area and also Google and Google Scholar because there are conferences and postgraduate work, thesis and foreign dissertations, but I don't particularly use the Capes search engine [...], and I have used this since my PIBIC (Institutional Program for Scientific Initiation Scholarships) [emphasis], since my scientific initiation, and then I got used to using ScienceDirect which is a Portal that accesses a certain base that is common [...] is one of that Capes has access and SCOPUS [...] basically has everything in these two [emphasis] (Interviewee 7).
The word of the participant shows that the habituation with other search services results from a personal trajectory, not being a process consolidated by the normative organization. There is no conformity in the construction of policies or practices aimed at the adoption of instruments to search for scientific production by the actors of the investigated program. The habit results from an economy of effort, not from policies and procedures rooted in the organization. The development of institutionalized practices is merit for discussion especially since it is a group of researchers with an active profile of publications.

The professor with the most publications in the last biennium, participant I4, claims to be selective in the use of the system because he does not find electronic texts from a certain historical period, which induces the use of other search services. It should be noted that part of the collection of periodical titles from the mid-twentieth century are not available on the Capes Portal, which is considered a negative point for interviewees who work with historical research. The limitation leads them to access other sources of research to obtain documents. The other interviewees, when asked about limitations, made no mention of non-access due to the characteristics of the Portal's database, but they stressed the importance of intense dissemination of the Portal to arouse the interest of a portion of researchers from the Program who have not yet adopted the Portal as a tool for accessing scientific information.

The use of search tools is an acceptable resource, in the first moment of the research, but the interviewee I6 understands that certain instruments are not valid sources for conducting academic research. With more experience among the interviewees, the researcher defends the use of the Portal because he considers the quality of the results of searches carried out using the Tool to be relevant compared to others. The use of these to the detriment of the Portal may have occurred due to the type of investigation conducted by researchers-users of the Program. It is a possible barrier to the second phase of the institutionalization process for using the Capes Portal, objectification, which involves a degree of social consensus among the actors of the organization. At this point, the positive impacts or resistance of groups could be better evaluated (ABRUTYN; TURNER, 2011), like the actors' intentions and formal processes and even disciplinarians of authorized speech, what the organization selects/chooses about its identity, legitimacy, symbolic capital and concept image.

All the scholars surveyed guided students, both doctoral and master's, in addition to acting as co-supervisors. Respondents published, on average, 10 papers in the period 2017-2018, which reveals a fruitful production. However, in the process of advising students, regarding the indication of bibliographic databases for research, some respondents answered that they did not indicate research sites for the students. Such practice reaffirms that the development of search activities occurs individually, with little or no influence from intrapair communication on the way they are organized. The behavior is evident within the interviewees who participated in Research Groups and the Institutional Program for Scientific Initiation Scholarships during the undergraduate course. They claim to have ease domain of using the Portal website:

[...] one has to learn like all interface one has to get used [ ... ] if you have quotes or quotes do not have [ ... ] the Boolean, filters, especially [emphasis], like everyone else, but once you get there it's interesting, you can log in and save your searches, you can do a very focused job, so it's really cool, I found it easy to learn [emphasis]. (Interviewee 5).

On the other hand, three interviewees - I3, I6, and I8 - point to difficulties regarding access and the location of documents through the Portal. Another point to consider is the fact that Interviewees E3 and E8 affirm that they have never accessed the Capes Portal. Putting the E8’s speech in perspective, as it is a researcher with little professional experience, he wonders about the possibility of a continuous process, typified as a source of inertia of the organizational
structure. The degree of consensus among the organizational actors reveals the normalization of a political structure, or the lack of it, to the organization's procedures (TOLBERT; HALL, 2015), whether formal, through rules and regulations, or informal, as the mimicry of behaviors with minimal innovative effort and cognitive-cultural inflection.

Information systems need to be integrated with the human network and other existing technological artifacts to be useful. Equally necessary is to pay attention to the organization's structure, work practices, and cultural aspects so that the technology introduced is not discarded or underused, as seen in the case studied. Based on the research findings, the institutionalization of the use of the tool is in its initial stage, despite being available for almost two decades. The lack of knowledge of the instrumental's functionalities and potential is evidenced in behaviors that go beyond search and access in the organization.

When asked if they knew and/or used remote access to the Portal, which allows access to the available content available to Federal Higher Education Institutions (IFES) from any equipment via the National Education and Research Network (RNP), some interviewees demonstrated that they did not know the resources offered by the Portal, and the users often revealed satisfaction in being able to take advantage of this facility.

Two interviewees believe that the Portal has journals that favor the development of research, but were unable to answer whether the creation of the Capes Portal positively influenced the academic production of the Program. This evaluation could be carried out after a series of training courses offered to the Program's faculty and students, which tend to improve the dissemination of the use of the tool (DE MIRANDA; CARVALHO, 2017).

The lack of an institutional/organizational communication campaign, associated with the lack of guidance regarding the use of the Portal, are determining intra-organizational factors for the low adherence of respondents to the Tool. The training offer can eliminate the difficulty of integrating the use of the Portal as a search tool, expanding the search repertoire of users of the Program. However, the systematization of the initiative should not necessarily start with or focus on Capes, nor on the coordination of graduate programs. It is argued that the material can be produced and accessed by the researchers themselves, within the scope of the research groups, on-demand, in line with the dynamics of professional training. It comes back to the discussion, therefore, regarding the interest and ability to make use of the instrumental in the context of long processes and with specific specificity, as is the training of the researcher.

The use of the Portal, in this case, occurs individually, guided by the interest and ease of the researcher-user in using the interface, as evidenced by the reports of the participants. The internship is characterized as an incipient habitualization, which results from the pressure exerted by peers, which could be induced by the “productivism” that permeates the academic environment.

The interviewees' reports are consistent with the behaviors observed over two decades, a time of indirect involvement of the researchers responsible for this work with the evaluated program. Based on the findings, it can be said that the productive arrangements in the program show practices that have been little changed by the introduction of the Portal da Capes, with the institutionalization process still in its initial stage, which confirms the assumption of the study.

In the institutional model studied, there is less influence of regulatory and normative elements in the lives of organizational actors, but the importance of “private collectivities” is significant, as potential links between individuals and the social world. In this case, the ambiance in research groups is considered as a "significant unit" that shapes individual behavior, as suggested by Scott (2013). The structuring role of the institutional environment is relative, with interpersonal relationships being more pronounced than the dominant social units, such as Capes or the governing body of the program.
FINAL CONSIDERATIONS

The results of the study reveal that neither the length of stay nor the time of lecturing in the Program, interfere with the experience with the use of the Portal. There is no difference between the reports of experiences on the part, both in the professors with more time in the Program, and by the newly hired.

Concerning the adoption and use of the Portal, it appears that it needs to be integrated with research activities, as well as receiving attention from faculty. Disclosure is a crucial element for the habitualization process to occur in the institutionalization of the use of the Capes Portal in the Program. The manifest preference for accessing electronic journals, to the detriment of the printed version, may favor the use of the Portal, especially by graduate students, since the interviewed faculty claim lack of time, or perhaps, of interest, to participate in training if offered. Work practices are not institutionalized, typifying to underutilization of the system, which tends to be minimally used even by researchers with more experience and scientific production.

Future investigations may use a comparative study among other graduate programs to verify the prevalence of problems registered in this research. It is valid to discuss the means to understand, together, the organizational practices and the use of the Portal, especially in areas such as health, which tend to make use of other databases.

It is also worth investigating the symbolism of power exercised by organizational actors, which was not the object of study in this work, especially in areas in which the social actor is in a hierarchical structure with a concentration of vertical relationships, which accompany the line of authority, shaping the productive process, which projects an image and generates a feedback and legitimation cycle of feedback.

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