Potentialities of technical visits in university teaching: applications in disciplines of information representation

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ABSTRACT

The educational practice carried out in higher education institutions represents a praiseworthy activity, above all because it provides vocational training. Although it is a very important task, challenges are constantly permeating university teaching, which requires constant reform of teaching methods adopted in classrooms. Therefore, this text deals with the contributions of the technical visits and the reflexes promoted by them when applied in technical-operational disciplines, in the Superior Course of Librarianship. It also presents theoretical foundations on university teaching, some characteristics of the technical visits and reflections regarding the higher education of Librarianship - focusing on the disciplines of Documentary Representation. This is a descriptive study of a qualitative nature, being conducted through a participatory research carried out in two disciplines of Library Science: Descriptive Representation I and II, whose technique used in data collection was direct observation. In order to strengthen the collected evidence, the study also establishes dialogues with the literature, through bibliographic research. It was verified that the technical visits function as pedagogical instruments that provoke the motivation and engagement of the participants with the learning, as well as promote the identification and visibility of the cataloging practices in bibliographic collections. In summary, the visits greatly contribute to the teaching of technical subjects, such as the cataloging of documents, providing a fusion between theory and practice; between the classroom and the labor market.

KEYWORDS

University teaching. Teaching in Librarianship. Teaching of Information Representation. Teaching methods and tools. Technical visits.

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Potencialidades das visitas técnicas na docência universitária: aplicações nas disciplinas de representação da informação

RESUMO

A prática educativa realizada nas instituições de ensino superior representa uma atividade louvável, sobretudo por proporcionar, sobremaneira, a formação profissional. Embora constitua um fazer de suma importância, desafios não deixam de permear a docência universitária, o que requer a constante reformação dos métodos de ensino adotados nas salas de aula. Portanto, este texto versa sobre as contribuições das visitas técnicas e os reflexos por elas promovidos quando aplicadas em disciplinas de cunho técnico-operacional, no Curso Superior de Biblioteconomia. Também apresenta fundamentos teóricos sobre docência universitária, algumas características das visitas técnicas e reflexões a respeito do ensino superior de Biblioteconomia - com foco nas disciplinas de Representação documentária. Trata-se de um estudo descritivo, de natureza qualitativa, sendo conduzido por meio de uma pesquisa participante realizada em duas disciplinas de Biblioteconomia: Representação Descritiva I e II, cuja técnica utilizada na coleta de dados foi a observação direta. A fim de fortalecer as evidências coletadas, o estudo também estabelece diálogos com a literatura, por meio de pesquisa bibliográfica. Constatou-se que as visitas técnicas funcionam como instrumentos pedagógicos que provocam a motivação e engajamento dos participantes com o aprendizado, como também promove a identificação e a visibilidade das práticas de catalogação em acervos bibliográficos. Em síntese, as visitas muito contribuem com o lecionamento de disciplinas técnicas, como a catalogação de documentos, proporcionando a fusão entre teoria e prática; entre sala de aula e mercado de trabalho.

PALAVRAS-CHAVE

Docência universitária. Docência em Biblioteconomia. Ensino da Representação da Informação. Métodos e instrumentos pedagógicos. Visitas técnicas.

Potencialidades de las visitas técnicas en la docencia universitaria: aplicaciones en las disciplinas de representación de la información

RESUMEN

La práctica educativa realizada en las instituciones de enseñanza superior representa una actividad loable, sobre todo por proporcionar, sobre todo, la formación profesional. Aunque se trata de hacer de suma importancia, desafíos no dejan de permear la docencia universitaria, lo que requiere la constante reforma de los métodos de enseñanza adoptados en las aulas. Por lo tanto, este texto versa sobre las contribuciones de las visitas técnicas y los reflejos por ellas promovidas cuando se aplican en disciplinas de carácter técnico-operacional, en el Curso Superior de Biblioteconomía. También presenta fundamentos teóricos sobre docencia universitaria, algunas características de las visitas técnicas y reflexiones acerca de la enseñanza superior de Biblioteconomía - con foco en las disciplinas de Representación documental. Se trata de un estudio descriptivo, de naturaleza cualitativa, siendo conducido por medio de una investigación participante realizada en dos disciplinas de Biblioteconomía: Representación Descriptiva I y II, cuya técnica utilizada en la recolección de datos fue la observación directa. A fin de fortalecer las evidencias recogidas, el estudio también establece diálogos con la literatura, por medio de investigación bibliográfica. Se constató que las visitas técnicas funcionan como instrumentos pedagógicos que provocan la motivación y el compromiso de los participantes con el aprendizaje, como también promueven la identificación y la visibilidad de las prácticas de catalogación en acervos bibliográficos. En síntesis, las visitas muy contribuyen con el aprendizaje de disciplinas técnicas, como la catalogación de documentos, proporcionando la fusión entre teoría y práctica; entre el aula y el mercado de trabajo.

PALABRAS CLAVE

Docencia universitária. Docencia en Biblioteconomía. Enseñanza de la Representación de la Información. Métodos e instrumentos pedagógicos. Visitas técnicas.

Introduction

The teaching practice carried out in the universities constitutes a set of formative actions that promote the qualification to the exercise of a profession next to the society. This commitment to university education - together with the various challenges faced by educational institutions in Brazil - promotes university teaching the need for constant reformulations in teaching methods, especially in the management of disciplines that address the technical-operational knowledge area.

Innovation needs to be considered as the main pillar that encourages the development of education plans. In addition to innovating, it will be up to the teacher to use creativity, in order to promote curricular activities that motivate the student's motivation and engagement in order to learn. In this way, the possibilities of training are enlarged, enabling qualified and competent professionals to work in society.

The need and importance of reformulating teaching methods, which need to be in tune with the reality and need of students and society, is a recurring theme in the literature. The Freirean proposals about the philosophy of teaching learning certainly represented the watershed for a liberating education, in which students and teachers, together, are participants in the process of building knowledge.

From an education based on the sharing of knowledge, several actions are formulated in order to transform the classroom into an interactive and shared learning laboratory. In general terms, these actions demystify the centralizing power of the teacher in the domain of knowledge, but also enable a more critical and reflexive attitude about what is already known.

Thus, a teaching practice with a more democratic content emerges, in which students and teachers are constantly learning, in order to propose a more complete formation of future professionals. The university professor, within this new model of education, behaves like a mediator, conducting the classes in a creative, dialogic and stimulating way, in order to awaken the student's reflective, creative and interventional capacity.

On university teaching and the postures adopted by teachers, in modernity, Veiga (2017) argues that this practice should have a scientific and pedagogical aspect, and that the institution needs to be recognized as a social space, in which social practices are performed, in favor of training, criticism, innovation and reflection.

Continuing on this same theoretical reflection, the university professor reconfigured their posture and method of teaching, besides establishing new ties with their students, when of the formative actions. In fact, the teacher expresses themselves as facilitators or mediators of the teaching-learning process, enabling "... the awakening of the subjects participating in this process, enabling through their practice, the making of innovative world readings and significant contributions of life and for life [...]" (LIMA, 2008, p. 12).

Gonçalves and Siqueira (2018) believe that the qualification of university education will happen through the development of skills and abilities that make classes enjoyable. This will happen as teachers use strategies that go beyond theoretical issues debated in the classroom, thus ensuring greater experimentation of professional doing.

Contact with professional practice represents the most appropriate way to identify, recognize and perform the technical activities of a profession. Therefore, in establishing teaching methods, the teacher uses other sources of research, mixing theory with practice; combining the school and the environment that surrounds it (DEMO, 2011).

In relation to theory and practice, as proposed by Demo (2011), several activities can be developed with students, in order to transform the university into an open, diversified, dynamic and interactive environment. Among these activities, Badaró et al. (2016) cite the technical visits, especially in environments that require a specialized technical performance. Therefore, technical visits can be considered as teaching tools, which tend to promote the approximation with the reality of the labor market, in order to reduce the distance between theory and practice.

Thus, these visits provide the visibility of what is learned in the classroom, and can be used mainly in disciplines that require the knowledge of a technique, an office, a specialized activity. In the context of Librarianship, many disciplines carry with them an exaggerated technicality, as with the disciplines that teach the rules and codes used to generate the documentary records that compose a collection.

As an example of technical subjects in the teaching of Librarianship are those that contemplate the practice of cataloging documents, also known as Descriptive Representation of Information. The excess of norms required in documentary representation requires the reformulation of teaching methods, as taught by Machado, Helde and Couto (2007). And, even in professional training, it is necessary for the student to know this work well, so that, in the context of his / her professional performance, he or she may well represent documentary records (RIBEIRO, 2012).

Considering, on the one hand, the importance of technical visits, as regards the concrete vision of the reality of a doing, and on the other, the difficulties that permeate the teaching of cataloging, given the exaggerated use of techniques, it is necessary to reflect: 1 - what strategies can be devised to enable a more effective teaching of cataloging in teaching in Library Science? 2 – what are the contributions of the technical visits when applied to this discipline?

Therefore, this text deals with the contributions of the technical visits and the reflexes promoted by them when applied in technical-operational disciplines, in the Superior Course of Librarianship. It also presents theoretical foundations on university teaching, higher education in Librarianship - focusing on the disciplines of Documentary Representation - and some characteristics of technical visits.

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Methodologically, the study is characterized as descriptive, of a qualitative nature. It includes a participant research, parallel to a bibliographical research on the subjects "University Teaching", "Teaching of cataloging" and "Technical visits as teaching methods in higher education". The participant research was carried out through the direct observation, with the participation of the researcher himself, in ministering two technical disciplines of the Superior Course of Librarianship: Descriptive Representation I and II.

Theoretical Research Bases

Universities play an important role in the social and economic development of a nation. In Brazil, although the first universities were created in the early nineteenth century, the movement in defense of the university intensified in the twentieth century, permeated by a discourse in favor of science, scientists and research (MARTINS, 2002).

The concern with vocational training and qualification arises later, with higher education being restricted to elite classes for decades, until a process of restructuring of education in the country, with greater investments, especially in the scope of the public university (MARTINS, 2002) .

The consequences of these events prompted the birth of an institution with multiple responsibilities, especially in what concerns the training of professionals to meet the needs of society. Today, the university relies on the trinity teaching-research-extension, understanding that this interaction is necessary to guarantee the quality of teaching, therefore, the teaching institution becomes a space dedicated to social practices and demands (MONFREDINI, 2016). Thus,

> the teaching activity must then involve an aggregate intention of awakening in the students a new social consciousness, which involves a competent and critical look at the historical-social reality of the country. It is then necessary to articulate the threefold task of higher education in its relation to knowledge: the pedagogical task of teaching, the social task of extension and the epistemic task of research, and then explicitly directed towards the transformation of society (SEVERINO, 2013, p. 48).

Therefore, teaching in these institutions demystifies any possibility of a conservative, centralizing and dominant educational practice. The university teaching aims at the continuous production of knowledge and the interference or applicability of this knowledge in the life of the citizens. As a consequence, practicing this practice requires mastery of the teacher's knowledge and the ability to stimulate his students to curiosity, reflection and criticality (CARABETTA JÚNIOR, 2010).

The commitment that sustains the teaching profession in the universities is justified by the complexities and multiplicities of tasks to which the teachers dedicate themselves to in their daily life. As a result of this situation, the university educational act enables the integral formation of the subjects, which leads us to affirm that higher education interferes in the

professional, personal, social and citizen training of the individual and others involved with the educational practice (GARCIA; SILVA, 2017).

In order for this integral formation required by higher education to take place, the teacher represents one of the main agents with such responsibility. The way of conducting the classes, especially with regard to teaching methods, should stimulate the participation of the students, so that they feel they are participants in the process, as well as experiencing situations that demonstrate the daily life of the profession. Thus, "only with the practice and development of the intellectual activity carried out in a concrete and participatory way is the formation of the integral being ..." (GONÇALVES, SIQUEIRA, 2018, p.).

For Junges and Behrens (2015), university teaching needs to be reformulated, and in order to do so, it will be necessary to establish appropriate training at the university, so that they can use educational procedures that share theory and practice. In this way, students become autonomous, producers and socializers of knowledge, understanding, contextualizing and recreating the reality of professional practice.

Motivating learners to pursue their own knowledge will certainly make them more critical and able to perfect professional practices. This should be the main goal of university education (DEMO, 2011). Indeed, in higher education, teachers encourage their students to search, analyze information, establish relationships among them, as well as to be able to "analyze various theories and authors on a given subject, compare them, discuss their application in real situations with the possible consequences for the population, from an environmental, ecological, social, political and economic point of view "(MASSETTO, 2003, p.4, emphasis added).

The discussions about the fusion between theory and practice, through academic activities that demonstrate the applications of the theoretical contents presented in the classroom are topics that are much debated in the literature. This evidences the contributions of applied field studies, in which students and teachers hold meetings beyond the university, establishing a closer approximation to the practice carried out in the labor market. Therefore, "[...] the articulation between theory and practice, mediated by the contact with the professional reality, stimulates the student to behave like the subject of his learning [...]" (ARAÚJO; LEAL, 2012, p. 101).

In this context, the technical visits manifest themselves as valuable strategies, as they dynamize the activities to be applied to the students. By using procedures that go beyond the university environment, which show real situations of everyday life, the student is inserted in a learning process that instigates him to make decisions, intervene in the reality to modify it, having a social commitment, if competent and citizen (MASETTO, 2003).

Technical visits are considered by Souza et al. (2012) as resources that enable professional and technological maturity. They are effective motivational instruments for

students, who have the possibility to better understand the contents of the curricular components and to experience in practice what they have learned in theory. Therefore,

> to increase the quality in the critical formation of the students and, at the same time, to offer methodological alternatives of learning, inserting the students in a dynamic world from the experience of different experiences and the contextualization of the diverse experiences, histories and cultures in an interdisciplinary perspective, with a view to approach and contextualize knowledge and reality (SOUZA et al., 2012, p. 1).

Badaró et al. (2016), when conducting a study in the area of Nursing, identified as main advantages of technical visits applied to university teaching, namely: 1 - highlight the approximation between theory and practice, facilitating content fixation; 2 - promote the development of a critical and reflective view on the reality of their profession; 3 - ensure the broad vision of an organization and the different services developed in it. They also defend that in this type of visit, the student will be able to use their academic experience as a subsidy for the development of different visits in their professional activity in the future.

In the understanding of Araújo and Quaresma (2014), technical visits are supported by observation activities of a specific reality, considering the practical actions and real situations of a fully functioning company. In this approach, the technical visit can serve as a complementary activity to the curricular components of the courses, consolidating itself in the form of a mechanism of integration between the university and the job market, whose goal is to make feasible "[...] pedagogical complementation of the theoretical and practical disciplines, as well as the **students' approximation to the work environment** "(ARAÚJO, QUARESMA, 2014, p.33, *emphasis added*).

In addition, by providing greater visibility of professional practice, these pedagogical resources or teaching methodologies, considered as innovative teaching instruments, also promote motivation and awaken reflection and critical sense to those involved with the educational practice, as taught by Badaró et al. (2016). Therefore, the visits aim

> [...] to increase the quality in the critical formation of the students and, at the same time, to offer methodological alternatives of learning, inserting the students in a dynamic world from the experience of different experiences and the contextualization of the diverse experiences, histories and cultures in an interdisciplinary perspective, with a view to approach and contextualize knowledge and reality (ARAÚJO; QUARESMA, 2014, p. 29).

Similar to the cited authors, it is important to mention that these teaching methodologies when applied in the field provide, in addition to the promotion of criticality in students, the intervention capacity, making them able to solve problem situations existing in professional practice (GONÇALVES; SIQUEIRA , 2018).

In all cases, these visits can be applied to different courses, permeating the entire university environment and placing the protagonists of these visits - teachers, students and workers - in connection with the social environment (LIMA, 2008). The disciplines with the application of specific techniques of an area of knowledge certainly play a crucial role in the

establishment of activities that fuse theory and practice, and failure to observe these questions can lead to the impoverishment of student's training for the job market. Thus, it is the function of the teachers to observe this importance and, when making their teaching plans, to approach the contents with their respective practices (SOUZA; LOBATO, 2012).

Specifically, regarding the teaching of librarianship, the application of practical activities is highlighted, especially in disciplines that contemplate teaching techniques and methods for handling documents in bibliographic collections. The disciplines of Information Representation, in which document cataloging practices are demonstrated, must be conducted in such a way that the professional knows the practice and the work context well, in the attempt to make representations appropriate to this context, considering, specially, the needs of those who will use these documents (RIBEIRO, 2012).

University teaching at the heart of the Information Representation disciplines has some challenges, mainly because these disciplines require the knowledge of technical doing, in order to guarantee a more effective learning. In addition, the professional who performs the documentary representations, the cataloger, must carry out technical analysis of the document, the information base, as well as "[...] to evaluate the data needs of the sponsoring institution and/or the institutions involved, in the case of cooperation, to know the norms and standards of inclusion of data to be used, as well as the program and format to be used "(MACHADO; HELDE; COUTO, 2007, p.101).

For Castro, Sales and Simionato (2016, p. 16, emphasis added), the teaching of librarianship goes through many transformations, especially with the adhesion to the digital technologies of the last decades. Cataloging, specifically, needs to be adapted to new content, which will require new ways of teaching such practices in the training disciplines. Thus, it is recommended that librarians' schools re-evaluate the teaching of cataloging, "[...] especially the hours available to reach new contents and their application in digital information environments, contemporaneously, and in **the practice of librarians in the job market**".

In agreement with the authors mentioned, Pereira (2013), for whom the teaching of cataloging needs to be highlighted in the curricula, since the disciplines of documentary representation are characterized as "core disciplines", as they are also considered as activities middle of the librarian practice institutions. Still in Pereira (2013, p.5), the need for the teacher to consider cataloging as a discipline that aims "not only at the education of future librarians, but also as a continuous process of learning in its daily doing and critical analysis on the area".

The use of methods based on research and practical activities represents a valid strategy to be adopted by cataloging teachers. The application of these methodologies in a practical context enabled several contributions to the student, as reported by Machado, Helde and Couto (2007, p.105). The results made possible "new airs for the group, opened new ways of thinking cataloging, and emerged as a provocative and stimulating factor to the

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articulation of knowledge, creating new possibilities of incentives also for the continuing training of professionals".

Baptista (2006) also reflects on the complexities in the teaching of Descriptive Representation of Information. It describes the cataloging as a specialized doing, inherent to the professional and, at the same time, taught in university.

Even if it has its potential for the professional practice of the librarian in the labor market, teaching this discipline may represent an obstacle, especially in cases where there is some lack of practical activity in the conduct of the discipline (BAPTISTA, 2006). Thus, the author reinforces that, in the context of technological changes and new paradigms inserted in the labor market and in teaching practice, it is necessary, among other aspects, to establish, in the teaching of cataloging, a balance between theoretical and professional practice.

Methodology

Methodologically, this article is characterized as qualitative in nature, with a descriptive approach. It presents this nature and approach because it was not intended to measure or quantify the data collected, but to present them descriptively, according to the evidences observed in the observed reality.

The procedures used for the scientific development of this work were participatory research and bibliographic research. The techniques of data collection were the observation, which guided the participant research and the collection of articles and books, in the case of bibliographical research .. For the selection of articles, the electronic catalogs of scientific journals in the area of Education and Information Science, and the selection of books was manifested in the catalog of a university library.

Participant research is a research method carried out in a specific context or situation in which all those involved in the research become partners, that is, knowledge builders, in which there are no research subjects, but subjects who are co-authors of the research. It is a methodology conducted in a participatory way, in which the researcher collects data and intervenes in a reality, modifying it and, at the same time, being modified by it (MINAYO, 2007).

Bibliographic research is the methodology for mapping information sources duly published in scientific communication channels, such as books, periodicals, newspapers, among others, whose purpose is to provide a closer approximation to the subject studied (GIL, 2010).

In fact, the participant research was carried out through the researcher's role as teacher in two disciplines of the Library Science Course, Descriptive Representation I and II. The choice of these disciplines is due to the technical and operational nature attributed to them,

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the importance they play in the curriculum of the course, and the challenges and complexities that permeate both teaching in universities and the practice of cataloging in job market.

Considering the need to adopt teaching procedures that go beyond the walls of universities, in order to merge theory and practice, considering, mainly, the practice as research carried out in an environment that develops the professional doing, as discussed in the researched literature (The research was carried out in the scope of the technical visits carried out in the two disciplines analyzed here.

Thus, the main characteristics of each discipline are presented below, and then the results obtained from the implementation of the technical visits. From the research, we present the perceptions and behaviors of students, teachers and professionals who conducted the visits, in order to identify the potential achieved with the use of this educational method in the teaching of cataloging.

Results

Descriptive Representation I and Descriptive II have as main purpose to propose the teaching of bibliographic records cataloging practices. They involve the study on the treatment and management of these registers, which are drawn up in order to be inserted in a catalog (printed or computerized), with a view to representing the documents individually, and, through this representation, guaranteeing the recovery of the item when it was searched.

In Descriptive I, offered in the second period of the Librarianship Course, theoretical and methodological questions about the concepts, methods, techniques and instruments are studied, as well as the main institutions involved with the cataloging activity in library collections.

On the other hand, in Descriptive II, studied in the third period, the teaching of the practices and work processes that permeate the doing of the cataloging is contemplated. Thus, the use of the rules contained in the codes, the formats used in the description, the composition of the records and, finally, the way in which these records are managed when incorporated into the documentary collection are studied in more detail.

It should be emphasized that Descriptive I, as it appears in the discipline plan, has a more conceptual, epistemological and methodological content. That is, theoretical questions are presented, the birth, the history of the cataloging and the main concepts related to this area. Descriptive II has applicability, that is, the procedures performed in professional practice are taught. In any case, the lecturer chose in both subjects to explain, in the first units, the theoretical questions, in order to present the practical part, consolidated through technical visits.

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In view of the programmatic contents and bibliographies used in Descriptive I, and in dialogue with the literature, it is important to describe the concept of cataloging, which is "[...] the study, preparation and organization of coded messages based on items existing or possible to be included in one or more collections, in order to allow the intersection between the messages contained in the items and the internal messages of the users "(MEY, 1995, p.5).

Introducing a classic concept of cataloging, it is considered as the set of activities that aim to describe the characteristics or forms of a document, so that this document becomes unique among a larger set called catalog. Therefore, cataloging is the art of building and managing the catalog of a library (BARBOSA, 1978).

The theoretical issues explained in Descriptive II allow the presentation of new procedures performed with cataloging, especially with the use of digital technologies. Thus, the construction and management of the records are structured in description formats, which can be decoded by machine (Marc Format), which guarantees the exchange of information, resulting in the computerized cooperative cataloging process (BAPTISTA, 2006).

> It is important to highlight that MARC21 is a format for data exchange, which informs how a bibliographic and catalog record should be described for successful import or export, but the catalog data model need not be structurally organized in the same format of a MARC21 record (FUSCO, 2011, p. 57 apud ASSUMPÇÃO; SANTOS, 2015, p. 67).

After the theoretical explained presentation of the two disciplines, the technical visits were next. In both, the groups visited the Technical Processing sector of the University Library. Previously, the teacher agreed with the head of the sector about presenting, for Descriptive I, more general questions, showing the unit sector, the team, the processes and the instruments of work. In Descriptive II, the librarian would present more practical questions, exposing the collection management software used, the description formats and the detailing of how the practice is performed for the construction and management of a bibliographic record.

During the visit with the descriptive class I, the librarian proceeded to present the sector, demonstrating at first the informational items that are cataloged in that place. The sector is responsible for cataloging only printed books, as well as academic papers such as theses and dissertations. The other materials that compose the unit's information collection (maps, periodicals, CDs and DVDs) are treated in other sectors of the library.

The participants of the visit were surprised by the fact that the cataloging of other items occurred in other sectors, as this could generate a certain dispersion or lack of connection in the ways of representing the items. From the interventions of the teacher and some students, the professional justified this fact because it is a cultural issue of that library. The practice could be integrated, however, employee shortages and lack of space in the industry, certainly, are some factors that have determined this division.

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After presenting the informational items treated in the Technical Processing Sector, the work team and the services performed by each professional were demonstrated. It was possible to identify that the sector is organized in an integrated way, in which a group of activities is determined for each two professionals, in view of the work processes flow chart.

According to the driver of the visit, in the specific context of that library, the informational treatment of documentary items pervades four important processes, which are: 1 - conference of the existence or not of the material in the collection; 2 - item analysis for extraction of catalytic data; 3 - printing of the labels and insertion in the item for location in the collection; 4 - evaluation of treatment and referral to the general collection. Image 1 demonstrates the flow of these work processes.

Image 1. Flow chart of the work processes demanded in the cataloging
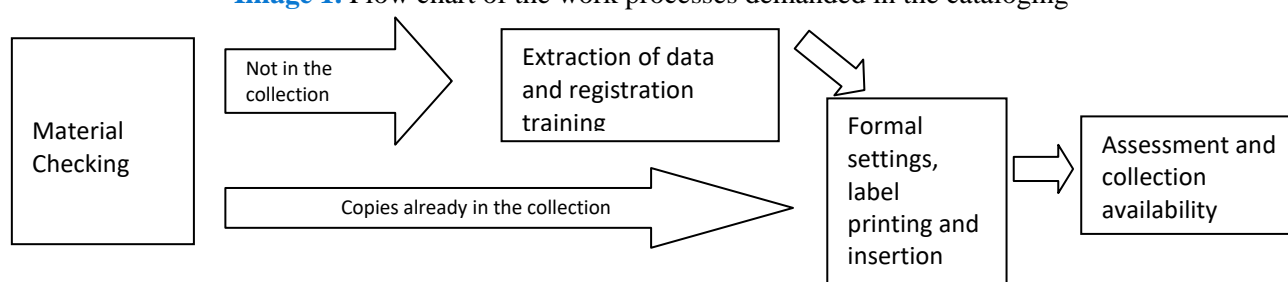
Source: research data (2016).

Image 1 is the result of the teacher's observations on what the librarian presented. Note that if the informational item does not exist in the system database, it is sent for the confection of its record. If the item already contains a copy in the base, it is sent directly to the printing stage, where small adjustments are made, considering the particularities of the new copy being represented.

From this explanation, students and teacher understood about the complexities that exist in the cataloging activity. It was possible to verify the detailed and careful analysis that must be done, so that there is no duplication of records in the system, as well as the descriptions are carried out with consistency, in order to facilitate the retrieval of the item when requested in the search process by the user.

After presenting the work processes and the documentary process, the professional presented the cataloging instruments, represented by the Anglo-American Cataloging Code (AACR2) [1] and a technical manual summarized by that code, which contains the guidelines, or step by step of how the professional should proceed in the practice of treatment of the materials.

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[1] It is a compendium of norms on how to form bibliographic records, considering the nature and specificities of each informational material. This code is used in much of the world, and was established after the establishment of cataloging principles, defined from one of the largest international cataloging meetings, the Paris Conference in 1961 (AACR2, 2004).

From the presentation of these instruments, the participants recognized the theoretical and methodological concepts and, mainly, in this exposition, identified the historical moments of the development of these languages, according to discussions presented in the classroom, based on the specific bibliographies of the discipline.

At the end of the visit, the teacher noticed feelings of satisfaction in the student, as well as, he himself got to better understand some intricacies that permeate the construction of the records. Participants also visualized the extensive work required in practice, which requires the management of an integrated work team, equipped with technical knowledge and human skills, with a view to making work consistent with the needs of the institution, users and society in general .

Based on these data, it is pertinent to dialogue with the literature. It is not enough only in the cataloging process to know the rules and codes, but to know the users of the documents and the details of the practice, with a view to a critical attitude and changes in favor of continuous improvement of professional work (RIBEIRO, 2012). In addition, by placing students in practical situations of daily professional life, it complements the teaching profession, "[...] articulating theory and practice and involving students, teachers and professionals, [in order to] integrate knowledge in its context [...]" (MACHADO; HELDE; COUTO, 2007, p. 105).

Regarding the technical visit carried out in the descipline Descriptive II, the professional presented the technical-operational procedures, in order to demonstrate the computerized actions in the management system of the library to prepare the bibliographic records. To this end, at first, he presented the software used, the Pergamum[2], and detailed, in a demonstrative way, through a multimedia projector, the main functions of the program.

Accessing the program, in the part destined to the creation of the registry, the professional simulated the treatment of a book. It demonstrated the structure of the registry, focusing on the Marc format, highlighting the fields and subfields for the composition of the metadata that will form the record (title, author, edition, keywords, among many others). Image 2 shows the interface of the program and its functionalities, focusing on the cataloging and registration of a new item, highlighting the fields to be filled in the Marc format.

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[2] It concerns a library management software, with a focus on the practices of managing the bibliographic records of documents. Institutional website of the Pergamum Network: <http: //www.pergamum.pucpr.br/redepergamum/pergamum_index.php> (PERGAMUM, 2018).

Image 2. Practical demonstration of Pergamum functionalities and formation of a new record
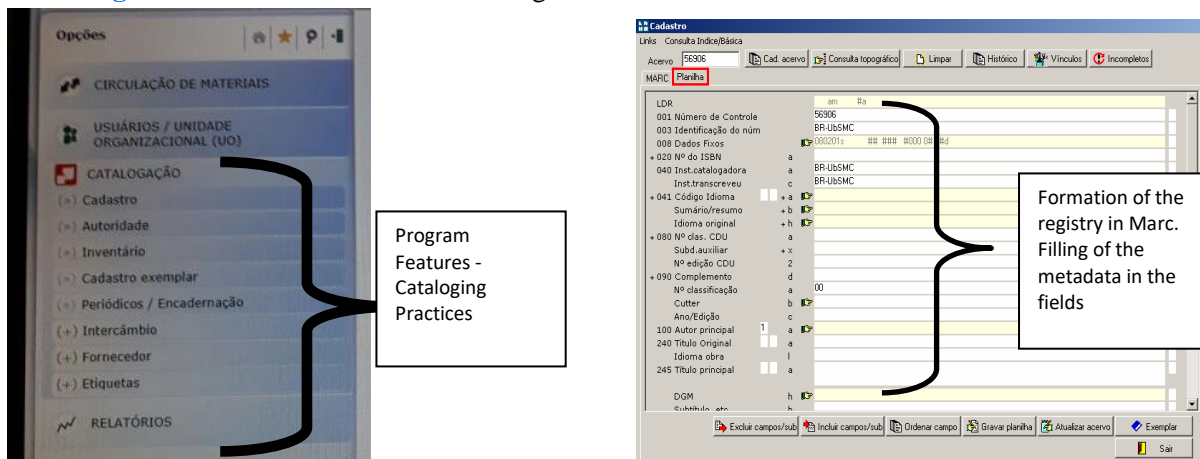
Source: research data (2016).

When completing the insertions in the fields and subfields, the system presented on screen the structure of the record in full (in the format of cataloging), with its transfiguration for labels that would be printed, in view, to be attached to the books (image 3).

Image 3. The making up of the registry - tab and label format
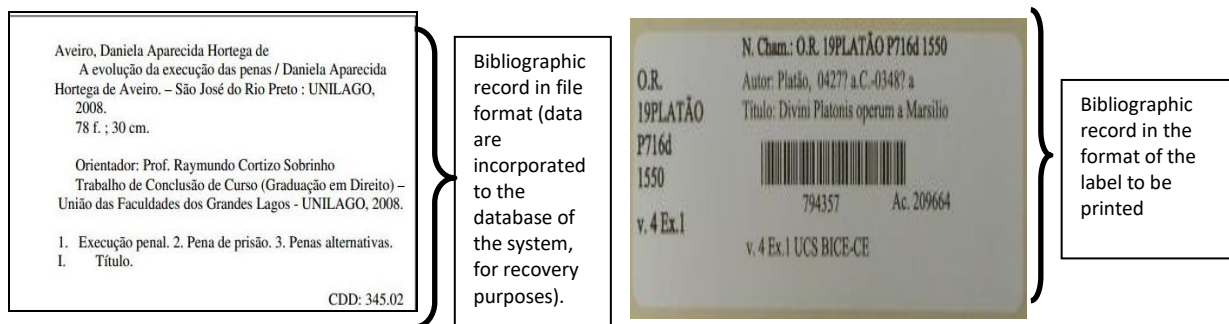
Source: research data (2016).

As presented by the librarian and described in figure 3, the bibliographic record of an item corresponds to the identity of the material to be incorporated in the collection. These are miniatures, or abbreviations of the material, which are manifested as the main product of the practice of cataloging. Still in the mentioned figure, the card presented in the screen of the program is no longer printed, because the data is incorporated in the system, being the responsibility of the user to search through the electronic catalog. The label is printed and attached to the spine of the material, allowing its visualization in the collection.

Through this explanation, the participants of the visit questioned the changes brought about by the adhesion of digital technologies, which provoked numerous transformations in the forms of representation and work carried out in libraries. The librarian dialogued with the class, emphasizing that the changes make the tasks more agile, saving time and resources. However, the work tends to become more detailed and complex, which requires the constant need to adapt professional practices, especially the activity of representing documents in a collection.

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> In the current scenario, in which the Internet has broken physical and geographical barriers regarding the circulation and availability of information, the specific activity of cataloging becomes part of a larger and more complex process. The growing introduction of standards that seek to adapt the organization of information to new realities, the publication of guides, tutorials, and studies that point to trends and perspectives of cataloging in the 21st century, are an unmistakable reflection of this evolution (BAPTISTA, 2006, p. 3).

With these reflections, it was verified that the students were able to make the connection between what was debated in the classroom, about the technological changes, with the reality of libraries, which are inserted in a market that is transformed and requires the adequacy of the institutions to social changes.

From the simulations on the formation of a new registry, the students showed curiosities about the system; perceived the benefits of computerized systems, especially with regard to the agility of the procedures; and, finally, identified some improvement needs, which evidenced the technical knowledge that the professional needs to have, as well as having an interventional and creative attitude, since the cataloging is consolidated as a process in constant improvement.

Thus, the results are shown to be satisfactory with respect to the students' learning and the adequacy and new knowledge and positioning by the teacher. These contributions promoted to all the participants show the provocative and stimulating potential coming from the technical visits and the participant research, in which, together, theory and practice were fused, in the search for renewed knowledge in the scope of cataloging.

These results confirm the discourse of Badaró et al. (2016), considering the potential in the use of technical visits as a formative action in the university, since "after observing and comparing it is possible to exchange information, develop new practices, expand knowledge and improve service development [. ..] ". At the core of the cataloging, we confirm the thesis of Baptista (2006), for whom the teaching of cataloging will only be of quality when contents and practices are in tune with the activities developed by the students, in mediation with teachers and professionals.

Thus, it is opportune to make cataloging a theoretically structured discipline, having to discuss and improve it, "[...] so as to make visible the technique that permeates the process of constructing forms of representation and presentation of informational resources in different environments" (SANTOS; CORRÊA, 2009, p. 69 apud PEREIRA, 2013, p. 5, our highlight).

Final Thoughts

The development of this research confirmed several positions on the contributions of technical visits in university teaching, especially when applied in disciplines that favor the development of a professional skill or practice. In addition, the importance, the successful practices and the challenges that permeate higher education have been reinforced,

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highlighting the need for improvements in the pedagogical procedures adopted in the disciplines focused on the practice of cataloging documents.

The history, development and importance attributed to higher education show how much the teaching practices need to be improved, in order to adapt to the new tendencies of the contemporaneity. The discourse of professional training as the responsibility of universities and the transformations involved with digital technologies further increase this need.

Faithful to the focus of this article, namely, the use of technical visits in the conduction of cataloging disciplines, it was verified that technical visits function as pedagogical tools that promtoes the student's motivation and engagement, as well as promoting the identification and visibility of cataloging practices in bibliographic collections. In summary, the visits greatly contribute to the teaching of technical subjects, such as the cataloging of documents, providing a fusion between theory and practice; between the classroom and the labor market.

The satisfactory results obtained from this experience justify the application of the technical visits in the disciplines of cataloging in the courses of Librarianship and other areas of information. These practices can be harnessed and reinvented, in order to constantly improve the formative actions, in favor of the fusion between theory and practice.

Thus, new applications in other technical disciplines are recommended, as it is also pertinent to investigate cataloging practices carried out in contexts outside the library, especially in computerized collections of large corporations and/or other digital environments that demand the organization of the information.

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