

## LIBRARIAN FORMATION: AN EXPERIENCE REPORT OF SCIENTIFIC INITIATION

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**ABSTRACT:** Presents an experience report about the process of elaboration, execution and evaluation in the Scientific Initiation Project named “Information Literacy and informational practice: a study of sustainable development and exercise of citizenship”, developed in the Library Science and Information Centre Management Course (CBG) of Federal University of Rio de Janeiro (UFRJ), in the years 2018 and 2019. Deals about an undergraduate scientific initiation project of educational, social, cultural and technological character, which aimed to develop research about study and actions of Information Literacy in information practices focused on sustainable development and exercise of citizenship. Presents initially a brief history of Library Science and librarians, as information professionals; history of UFRJ as an institution concerned with teaching, research and extension; and the creation of CBG at UFRJ. Points out the relevance of the project as learning beyond the classroom and the collective and collaborative development between students and teachers involved in its elaboration.

**Keywords:** Scientific Initiation Project, Federal University of Rio de Janeiro, Information Literacy, Informational Practice, 2030 Agenda, Sustainable Development.

## **Introduction**

The involvement of undergraduate students during the elaboration of academic papers of scientific initiation gives them opportunity to leave university with more knowledge to be shared in the academic community and as a future professional.

The scientific production, according Ferreira and Da Silva (2012: 2, our translation) could be considered as an exposition of information derived from research results. And so “[...] man shapes information by producing knowledge through his critical analysis and impressions of the phenomena that is around him, supported by the results of his research and by great thinkers and experts in the field.”.

Thus, the scientific research allows the student to have a broader view of his/ her future profession, such as the possibility to apply in an effective way the theories learned in the classroom and to aggregate new knowledge that were not taught during the undergraduate, but that will make possible the use of his/her critical and ethical senses in front of the information used during the research.

Therefore, the present paper shows, in a concise way, the experience lived by a student of the 8th (eighth) period of the Library Science and Information Centre

Management School (CBG)<sup>1</sup> of the Federal University of Rio de Janeiro (UFRJ) as a scholarship student of PIBIC/UFRJ 2018-2020.

## **Library Science**

The concept of Library Science, according to its morphological composition (*biblion* = books + *theca* = box + *nomos* = rule), can be understood as “[..] rules to organize books or other documents in boxes, materialized in shelves, rooms, buildings, etc.” (Fonseca, 2007; Russo, 2010: 37, our translation). Russo also support Le Coadic (2004) definition, understanding that the term “Library Science” could be conceptualized as an “[...] union of two words - library and economy- this meaning organization, administration, management. ”, and that is concerned, as an area of knowledge, with book collections, library as an organizing institution and its users (Russo, 2010: 36, our translation).

The field of Library Science has its evolution characterized by his passage from theoretical studies to the practice, for instance as a service provider to the public, such as, “ [...] the democratization of the access to information for the generation of knowledge and innovation.” (Botão, 2016, our translation).

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<sup>1</sup> The “CBG” acronym means Curso de Biblioteconomia e Gestão de Unidades de Informação in portuguese.

Historically, the first librarians, considered scholars and bibliophiles, that established the libraries, were occupied in the organization and classification of all knowledge produced and registered in the form of document (Ortega, 2004: 2; Santos and Rodrigues, 2013: 119, our translation). This activity lasted until the nineteenth century, when the public libraries were in ascent and were supported by the philosophical affirmative of the education as common right to all, became a public service.

This change was noted with the foundation of American Library Association (ALA), in the year of 1876, in the United States, which allowed the Library Science to follow new and diversified ways. In the course of time appeared other national and international institutions, such as the Brazilian Federation Librarians Association (FEBAB)<sup>2</sup> and the International Federation of Library Associations (IFLA), which, respectively, made possible the consolidation of the area. (Russo, 2010, our translation).

Thus, according to Shera (1980; Russo, 2010, our translation) due to understanding a set of organisms, technical operations and principles that give maximum use to documents for the social good, Library Science can be considered as an area of knowledge.

### **Librarian, information professional**

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<sup>2</sup> The “FEBAB” acronym means Federação Brasileira de Associações de Bibliotecários in portuguese.

Some time ago, the librarian had his identity formed in the popular imagination by what was seen in movies or read in books. The professionals were characterized as elderly people, usually female, without posture, wore glasses and asked for silence when listening to any kind of noise inside the library. However, “[...] the stereotype presented is part of the memory that recollects to the practices of ancient individuals responsible for the preservation and protection of the society knowledge, such as those of the monk copyist, in the medieval period ”, as asserted by De Assis (2018: 14, our translation).

Nevertheless, modernity has been marked by constant changes, which are the results of the innovation, technology and refinement, considering, as well, that the information is the most competitive product in the society. Thereby, it becomes necessary new methods and competences to be adopted by the professional (Anna et al., 2014, our translation).

First of all, it is necessary to point out that, though it is our focus, the librarian is not the only informational professional existent. This one also share of this title with the museologists, archivists, journalists, systems analyst, documentalists, administrators, among others, which joined form the group of the Modern Information Professional (MIP). That happens because the information, as already mentioned, represents a social good accessible by all and that can be found in several supports and technologies, therefore it demands professionals of different areas, “[...] with skills and different

competences.” (Santos et al., 2014, our translation), and these professionals“ [...] apply their knowledge on information and technology with a basic purpose in mind: to obtain the right information, from the right resource to the right client, at the right time and in the most appropriate way for the intended use and at a cost that is justified by its use.” (Mason, 1990: 125; Santos, 2000: 108, our translation).

Pinheiro (2002; Santos and Rodrigues, 2013) states that the librarian is the specialist responsible for the organization of the knowledge and in supplying bibliographical information, facilitating their access and use. In addition, Santos, Duarte and Lima (2014) affirm that the competences and skills of the librarian aim “[...] promote the access, use and appropriation of the information, as well as to allow the social and digital inclusion of the subjects.”. In this perspective, the librarian, while information professional, has the mediator's role, which makes the information wanted by the users accessible. So being, it is necessary to make use of different techniques for the treatment of this information, like organization, storage and dissemination, which contribute to “[...] the democratization of the access to the information, emphasizing the importance of the role of librarians in the society.” (De Assis, 2018: 16, our translation).

It is important to be noted that in the field of Library Science, the consequence of increasing demands and competitiveness in the market can be seen in the versatility of the professional as manager of an information unit, since, according to Maciel and Mendonça (2016: 5; Alves and Oliveira, 2016: 75, our translation), the library performs

"[...] the managerial functions of an administrative nature [and are] responsible for the activation of all the mean or end activities and for their targeting and adjustment to the goals and objectives of the system [...]". In other words, as well as administrators, the librarian is also responsible for planning, organizing, directing and controlling, in order to lead the information unit (organization) that belongs to success.

Another important role developed by the librarian is an educator. The 2030 Agenda, developed by the member countries of the United Nations, has as one of its Sustainable Development Goals (SDGs) the quality education, which means, "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."(United Nations, 2015). In this perspective, IFLA developed the "IFLA Program of Action for Development through Libraries", consisting of tools to support libraries in access to information and knowledge, and to contribute to the achievement of the objectives set forth in 2030 Agenda. Thus, the librarian becomes responsible for guiding its users to actions that foster the development of critical and ethical information practices, thus promoting information competence as a lifelong process for the exercise of citizenship. (Da Silva, Zattar, De Sá, 2018).

**UFRJ – teaching, research and extension**

According to Chauí (2003: 5, our translation), the university can be defined as a social institution, that "[...] expresses in a determinate way the structure and mode of functioning of society as a whole." In this way, its norms, rules and values make it a social institution different from the others, just as it has autonomy face religion and the State, possessing the character of constructor of knowledge, through "[...] formation, reflection, creation and criticism." (Oliveira, 2016, our translation).

The Federal University of Rio de Janeiro was created by means of Decree No. 14,343, dated September 7, 1920, named after the University of Rio de Janeiro. Created by the union of three schools: Law School, Medical School, and the Polytechnic School. However, this junction does not yet constitute a university structure. The Law n°. 452 of July 5, 1937, implemented a new reform by changing the denomination of the institution to University of Brazil, as well as incorporating several schools or colleges located in the city of Rio de Janeiro.

However, only in 1965, with Law n°. 4,831, dated November 5, was granted its autonomy and received its current denomination of Federal University of Rio de Janeiro, for as much this law, sanctioned by the Federal Government, determined that university institutions were to be standardized for a "federal" university plus the name of their respective State, as assert their Proposal for a Five-Year Institutional Development Plan (2006: 41, our translation ) "UFRJ adopted the new nomenclature, but preserved its original structure of schools and colleges, independent of each other [...]".

UFRJ it is a teaching, research and extension institution, seated on the state of Rio de Janeiro, characterized as a legal entity of public law and structured as an autarchy of special nature, endowed with didactic-scientific, administrative, disciplinar autonomy and of financial and patrimonial management.

The university understands its mission is to “ [...] provide to brazilian society the instruments to dominate, expand, cultivate, apply and disseminate the universal patrimony of human knowledge, enabling all its members to act as a transforming force.” (Federal University of Rio de Janeiro, 2006: 11, our translation), dedicating specifically to improve the student's integral education, the search and expansion of knowledge, as well as the preservation and diffusion of culture.

According to Article 207 of the 1988 Federal Constitution, universities must obey the principle of inseparability between teaching, research and extension, which means, these activities must be considered of equal importance. (De Sá and Zattar, 2016: 206, our translation).

The Statute of UFRJ (2018, our translation) classifies one of the objectives of the university as “[...] research work and scientific investigation, philosophical and technological research, focused on the development of science, technology and the creation and diffusion of culture [...]”, which is associated with one of the strategic development lines for the implementation of the Institutional Development Plan, through

the goal of creating transdisciplinary institutional programs that integrates teaching, research and extension.

### ***Library Science and Information Centre Management Course***

The creation of the course was based on the vision of the first director of the Central Library of UFRJ, librarian Lydia de Queiroz Sambaqui, in the 1950s. The librarian stood out for having the proposal to create an eight-storey building, seven would be destined to be the Central Library of the university and the last floor, destined to the course of Library Science. The focus of this proposal was the exchange of experiences arising from the proximity between the existing libraries in the University and the training course to be developed

(Federal University of Rio de Janeiro, [20--], our translation).

In 2001, the proposal of the political-pedagogical project of the course was elaborated on the initiative of the Coordenação do Sistema de Bibliotecas e Informação (Coordination of the System of Libraries and Information) - SiBI<sup>3</sup>, with a working committee, composed of 12 (twelve) librarians, masters and specialists in the área (Federal University of Rio de Janeiro, [20--]).

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<sup>3</sup> The “SIBi” acronym means Sistema de Bibliotecas e Informação in portuguese.

This pedagogical proposal of the Library Science course was carried out by analyzing another thirty-eight curricular matrices that were already offered in the country, including Rio de Janeiro, where the course was offered in three other institutions. The innovative character of the course proposal was the association of the Library Science area with Management, since, according to the librarian Eliana Taborda, it was necessary that "[...] our students had this kind of reasoning, a little accounting, a bit of finance, administration, marketing in the curriculum, so they could be successful in the future job market. " (De Sá and Pereira, 2016: 189, our translation).

Therefore, today, the course is linked to the area of Administration, also in view of its focus on Management, since, as stated by De Oliveira and Costa (2016: 16-17, our translation), "The course is the only one in the country with a project with a strong orientation towards the training of librarian manager, but without ignoring the classical and humanistic formation of the profession, being therefore housed at FACC<sup>4</sup> (Accounting Sciences and Administration Faculty) [...]" which also highlights UFRJ among other institutions, which have, by majority, a connection with the area of Communication.

Since 2006, after acceptance of the pedagogical proposal in 2005, the course of Library Science and Information Centre Management is composed of students and

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<sup>4</sup> The "FACC" acronym means Faculdade de Administração e Ciências Contábeis in portuguese.

teachers active in the academic and political participation of the university, which has generated the "[... ] development of various projects of scientific initiation and extension, presentation of scientific papers in national and international events, organization of events and involvement with the associative movements." (De Sá and Pereira, 2016: 187, our translation).

### ***Professional education in Library Science***

The first undergraduate course for librarians in Brazil was created at the beginning of the 20th century, in 1911, at the Biblioteca Nacional (National Library) in Rio de Janeiro. The aim of the course was to "[...] remedy the difficulties in the library for generations regarding the qualification of personnel" (Castro, 2000: 53, our translation). However, in 1912, due to withdrawal of enrollment by the institution's employees, the course could not function.

In 1915 new admission registers were opened to the course, and only twenty-one (21) candidates were accepted, as long as they met the conditions of admission present in Art. 36, of the regulation of the library of the year 1910. From this moment, the course's interdisciplinarity is observed, since the selection process was composed of a "[...] written test of Portuguese and oral tests of Geography, Literature, Universal History and Languages: french, english and latin." (De Almeida and Baptista, 2013: 2, our

translation). It should be emphasized that, to undergraduate as a librarian, was necessary "[...]to have a general culture which included, besides knowledge of the mother tongue, demonstrated in a written test, universal knowledge in diverse fields, allied to the domains of languages spoken in Arts, Sciences and Literature." (Castro, 2000: 55, our translation).

It is worth mentioning that BN had a humanistic characteristic in teaching, due to influences of the education of the *École de Chartes*. However, to attend the demands of the labor market and american technicality in 1944, the BN inserted technical disciplines in its curriculum, such as Cataloging, Classification, Bibliography and References. (De Almeida and Baptista, 2013).

In 1962, Library Science courses were introduced in Brazilian universities at an undergraduate, since the profession became a higher level, as established by Law 4.084/62, a decree that establishes the profession of librarian and regulates its exercise.

The law asserts that "The professional designation of librarian [...] is exclusive to bachelors in Library Science" and that the exercise of the function will only be allowed, regardless of its branches, "[...] to the Bachelor's in Library Science, holders of diplomas dispatched by higher-level official, equivalent, or officially recognized Librarianship Schools; [...] to librarians holding diplomas from foreign institutions who present their diplomas validated in Brazil, in accordance with current legislation." (Brazil, 1962, our translation).

For this reason, the first Minimum Curriculum for the course was drawn up, consisting of a list of thirteen subjects with a minimum duration of 3 (three) academic years for the course, with 2500 hours. It is worth mentioning that this curriculum addresses humanistic and cultural as well as technical issues. However, with the dissatisfaction of many schools, due to the excess of cultural disciplines implanted in an attempt to update the curriculum without disciplinary cuts, it was requested to reformulate the document (Mueller, 1988).

In 1982, the Federal Council of Education (CFE)<sup>5</sup>, together with the Brazilian Association of Schools of Library and Document (ABEBD)<sup>6</sup> and other professors of several Librarianship courses in the country, promoted the second Minimum Curriculum, composed of subjects of general, instrumental and professional education (De Almeida and Baptista, 2013). However, like the first one, this curriculum generated discontent among the academicians due to "[...] the number of disciplines that vary between very technical and excessively humanistic character of the established contents" (Russo, 1966; Macedo, 1963; Souza, 1990; De Almeida and Baptista, 2013: 7-8, our translation).

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<sup>5</sup> The "FACC" acronym means Conselho Federal de Educação in portuguese.

<sup>6</sup> The "ABEBD" acronym means Associação Brasileira de Ensino de Biblioteconomia e Documentação in portuguese. But, in 2001, the ABEBD was deactivated and renamed to Associação Brasileira de Educação em Ciência da Informação (ABECIN).

According to the National Education Guidelines and Framework Law (Lei de Diretrizes e Bases da Educação—LDB) of 1996, the Article 53 assures autonomy to universities to "[...] create, organize and extinguish courses and programs at its centers of higher education [...]; to establish the curricula of their courses and programs, observing the relevant general guidelines; [...] establish plans, programs and projects for scientific research, artistic production and extension activities ... "(Brazil, 1996, our translation).

In 2001, the National Council of Education / Higher Education Chamber (Conselho Nacional de Educação -CNE /Câmara de Educação Superior- CES 492/2001) issued a report that defined the profile of the undergraduates, their skills and abilities, curricular content, the importance of internships and complementary activities, the institutional evaluation criteria and the general structure of the course.

With flexibility, autonomy and evolution in the curriculum of the Library Science Course, the recently created course had its curriculum approved in the year 2005. Since it is a presential course, the recommended duration for the conclusion is 8 (eight) to 12 (twelve) semesters and a minimum number of 2400 (two thousand and four hundred) hours to be fulfilled, both in Campus Praia Vermelha and Campus Cidade Universitária<sup>7</sup>.

With a curriculum with more than 100 (one hundred) subjects, between compulsory and elective, 37% (thirty-seven percent) of these correspond with Librarianship, 33% (thirty-three percent) in the Management area and 30% (thirty

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<sup>7</sup> The course began to be offered at the Cidade Universitária Campus in 2010.

percent) in interdisciplinary fields with the course, such as History of Registration and Information, Portuguese Language, Communication and Brazilian Reality, Sociology and Philosophy, because it is believed that this variety of disciplines can improve the education of librarians to be able to adopt critical thinking and respect before different realities.

It is worth mentioning the discipline of Information Literacy (IL), being the CBG considered the pioneer in the insertion of the theme in the curriculum of the course. This subject "has been present since the first pedagogical project was drawn up in the early 2000s and is the main point related to disciplinary studies on the information service" (De Sá and Zattar, 2016: 208, our translation). Its importance lies in the formation of the librarian both as an individual and as an information professional, "[...] capable of promoting continuous learning practices." (De Sá and Zattar, 2016: 208, our translation).

### ***Research project of scientific initiation***

The research at UFRJ, according to Section IV of its Statute (Federal University of Rio de Janeiro, 2018, our translation), claim that this is a required process in academic activity, independent of the knowledge area, because it allows the "[...] discovery of vocations, development of originative and creative faculties, enhancement of work skills, [and] formation of new human values.". The scientific initiation values and encourages

activities aimed at the research initiative, since they produce knowledge to contribute to social and country development.

One of the first institutional programs of scientific research whose university has partnered with the National Council of Scientific and Technological Development (CNPq)<sup>8</sup> is the Institutional Program for Scientific Initiation Scholarships (PIBIC)<sup>9</sup>, that “[...] aims to support the policy of Scientific Initiation developed in the Institutions of Education and / or Research, through the concession of scholarships of Scientific Initiation to undergraduate students integrated in scientific research.” (National Council of Scientific and Technological Development, [20--], our translation), and has as its objectives to awaken the scientific vocation and encourage new talents among undergraduate students, so they will be prepared to get in the postgraduate course and reduce the average time of stay, as well as, it also expand the access and the integration of students into scientific culture.

### ***PIBIC 2018-2020 of information literacy***

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<sup>8</sup> The “CNPq” acronym means Conselho Nacional de Desenvolvimento Científico e Tecnológico in portuguese.

<sup>9</sup> The “PIBIC” acronym means Programa Institucional de Bolsas de Iniciação Científica in portuguese.

Aiming to expand learning beyond the university community's classroom and the development of collaborative and collective work, one of the projects developed by scientific initiation at UFRJ with CBG is the "Information literacy and information practice: a study of sustainable development and the exercise of citizenship", coordinated by two university professors, with the collaboration of others interested researchers and technical-administrative. Also are included in the course's students, once they made the disciplines of Informational Resources I, Informational Resources II and Information Literacy at Cidade Universitária or Praia Vermelha Campus (De Sá and Zattar, 2018).

This project's main objective is "[...] to develop researches about studies and information literacy actions in informational practices aimed to sustainable development and exercise of citizenship." (De Sá and Zattar, 2018: 5, our translation), having information literacy defined as a "[...] set of integrated skills and resources that allows recognize the necessity of the information and be able to find, evaluate and use this in an effectively and ethically way in learning communities." (De Sá and Zattar, 2018: 3, our translation), as a continuous process of learning, and the informational practice "[...] as a social process of collective construction of the information realized from the undertaken speeches in the interactions in the processes of search and use information that are constituted collectively, socially and dialogically in the discursive or domains of knowledge." (Savolainen, 2007; De Sá and Zattar, 2018: 3, our translation). The

preference in approach the theme "sustainable development" is given by the "[...] strategic character that the theme currently assumes." (De Sá and Zattar, 2018: 6, our translation).

### **From theory to practice: a student in training**

The practical activities developed during the project relied on theoretical experiences taught in classroom. Therefore, the methodological proceeding of this project was based on the bibliographical research of a qualitative and quantitative nature, whereas the data of the research were collected from material already elaborated, in the case, scientific articles (Gil, 2008).

These activities started in August of 2018 and for each phase a report was prepared describing the actions taken by those who were involved in the project.

As a first activity, was carried out an update of the literature on databases and information practices through a survey of research data at renowned bases in the information science field, both nationally and internationally, as: Biblioteca Digital Brasileira de Teses e Dissertações (BDTD); Scientific Electronic Library Online Brasil (SciELO); Base de Dados de Periódicos em Ciência da Informação (BRAPCI) e Pesquisa Brasileira em Ciência da Informação e Biblioteconomia (PBCIB).

The choice of the keywords that guided the research was given by the terms 'informational practice', 'informational behavior' and 'user study', as well as the terms

'information literacy', 'informational competence', 'informational fluency' and 'competence in information', used by several scholars in the field, as presented by Campello (2009: 35) in her publication '*Letramento informacional no Brasil: práticas educativas de Bibliotecários em escolas de ensino básico*'.

To refine the research, some resources were used, such as the boolean operator 'OR', the search resource (quotes), language selection, time clipping and selection for searching in all fields, as title, abstract and keywords.

During the design of the project two databases were included: Information Science and Technology Abstracts (ISTA), Library and Information Science Abstracts (LISA), which, along with Brapci, became the main sources of research. Also, the terms '2030 Agenda', ' Sustainable Development Objectives' and 'professional information' were added to the keyword group to attend theme 'Information and publication data Objectives The Sustainable Development of the United Nations 2030 Agenda." one of the themes of the event organized by the Associação de Educação e Investigação em Ciência da Informação da Iberoamérica e Caribe (EDICIC), which was submitted for publication for presentation.

It is possible to relate this first practical phase of the research with the theories and concepts taught in the disciplines of Information Resources I and II, such as the use of search services, information retrieval process, search strategies and steps, research in sources of information general and specialized, as well as carry out the evaluation of the

sources of information through evaluation's criteria that is related to the content of the documents.

In view of the results of the first phase, 83 (eighty-three) documents at all, only 17 (seventeen) obeyed the necessary cut-offs for the research. And, then, the second phase began, which consisted in the critical analysis of the publications contents, through the reading of title, abstract, keywords and content, so that was possible to make the relation of these with the proposed theme and with the research development.

Thus, we can link this research step to the discipline of information literacy, once it is characterized as a continuous process of learning, involving information, knowledge and intelligence, with personal and social values, allowing the student to be able to determine the nature and extension of their informational needs, recognizing learning as a continuous informational action based on the localization, evaluation and use of information (Dudziak, 2003). This discipline allowed the student to identify and to handle sources of information, as well as to evaluate them in a critical and ethical way, to generate new information to be disseminated through this research.

As a result, it can be seen that in the course of this research, the scientific production at national level, related to 2030 Agenda and Sustainable Development Goals (SDGs), coupled with the information literacy and information practice between the years 2017/2018 was low. However, even with this small amount, most of the documents address the goals set by the UN, such as quality education, and the publications also deals

about the importance of information literacy in the development of education, as well as the role of the librarian, as educational agent, who should guide their users towards actions that develop and stimulate the exercise of citizenship. The publications also emphasize the role of libraries as professionals that can stimulate the society for the development of 2030 Agenda in their country.

## **Conclusion**

Therefore, scientific research and production allows the student to be in contact with new possibilities in the field of study that is included. The process of the scientific initiation project "Information Literacy and informational practice: a study of the sustainable development and exercise of citizenship" may be considered a positive and valid experience, once this research was submitted and approved to be presented by those involved in the IX Iberian Encounter EDICIC 2019, in Barcelona.

In relation to the development of collective and collaborative work, there is an immediate impact on the learning possibilities of the academic community beyond the classroom environment in its citizen and professional education, as well as the involvement and deepening of the contents taught in the disciplines here related and the development of a future professional of information that will be able for research.

As a student and future information professional, it is worth noting that the participation in a project of scientific initiation grants the opportunity to experience the academic life activities, such as participating in research and scientific events in the area, even as in the production of scientific articles, activities not reserved only for the present, but also for the future, since research allows for lifelong learning.

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