

# Organization and Representation of Indigenous Scientific Production: A Case Study on the Institutional Repository in Brazil

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**Abstract:** The 2019 United Nations General Assembly declared that the years of 2022 to 2032 will encompass the International Decade of Indigenous Languages. Within this context, information Science (IC) and knowledge organization (OC) play a central role in the construction of policies and actions aimed at preserving indigenous languages. As such, our research aimed to diagnose, make propositions, and run preliminary tests in an Institutional Repository (IR) of a Brazilian Federal University. More specifically, this work regards the inclusion of metadata to represent indigenous scientific production. The main operations in this study included the creation and adaptation of metadata fields in the Dublin Core scheme. These were to specifically indicate indigenous collective authorship, indigenous names in an authorship, summaries in indigenous language, keywords in indigenous language, and title in indigenous language. The methods were literature review, applied research, and an experimental research. The implementations made in RI enabled, even if on a preliminary basis, the institution's repository as a robust instrument for archiving and

accessing scientific information. It is also a means for preservation, visibility, appreciation, and respect for indigenous languages and knowledge, which are currently threatened.

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## 1. Introduction

Studies dedicated to Institutional Repositories (IR) have received a growing interest from the field of Information Science, particularly to enhance the process of dissemination, preservation, retrieval, and access to information. A significant amount of research in the field of Information and Knowledge Organization has been dedicated to the qualification of document representation processes in Institutional Repositories. This is a process that directly impacts the way in which registered scientific knowledge can be accessed by society.

Nevertheless, the policies that generally guide representation in repositories still deserve attention as to be implemented and provide more inclusive protocols for cataloging, indexing, and making use of language processes in the representation and description of content. The qualification of these processes in Institutional Repositories becomes essential at a time when, especially during the last decade in Brazil, there has been a growing increase in the participation of indigenous students in the country's public universities. Students who, both at undergraduate and graduate levels, begin to produce and publish scientific knowledge which is then made available by the Institutional Repositories of these universities.

An entire mode of knowledge production has recently been proposed based on indigenous worldviews towards scientific knowledge, which considers multidimensional concepts, intersectional methodologies, collective and community authorship, as well as keywords assigned to represent scientific knowledge with ancestral meanings. These are important elements in validation criteria so that indigenous scientific knowledge constructed in Brazilian public universities can be recorded, archived, recovered, and made accessible in a manner consistent with its mode of production. In this context, the research question that this article aims to answer is: How can the scarcity of library information systems that enhance the descriptive and thematic representation of Indigenous knowledge produced in Brazilian public universities be addressed through the analysis and proposal of "decolonial metadata" structures in academic Institutional Repositories?

Given this briefly exposed scenario, our research aimed to diagnose, propose, and run preliminary tests in the Institutional Repository of the Universidade Federal de São Car-

los (São Carlos Federal University, hereforth noted as UFSCar). These efforts aim at the inclusion and adaptation of metadata fields for the following – indigenous collective authorship, indigenous name in an authorship, summary in indigenous language, keywords in indigenous language, and title in indigenous language. This seeks to meet some of the CARE Principles oriented towards Indigenous Data Governance, which was proposed by the Global Indigenous Data Alliance and were established during the International Data Week and Research Data Alliance Plenary (Vidotti et al. 2021).

As such, the article presents an overview of affirmative action policies for the inclusion of the indigenous population at UFSCar, thus contextualizing when the policies emerged in Brazil and when they were in fact incorporated into the University. A bibliographical survey was subsequently carried out on indigenous representation and Knowledge Organization Systems, which provided support for understanding the importance of this theme in this particular field. Some of the laws guaranteeing the use of indigenous languages in Brazil are subsequently presented, thus reinforcing the importance of document representation processes, especially in Digital/Institutional Repositories. Digital Repositories are contextualized as a tool that guarantees the preservation, recovery, and access to scientific knowledge. The emergence of the UFSCar Institutional Repository is then contextualized, and finally, the presentation of the actions and results of the Dublin Core field and metadata inclusion for representing the indigenous language.

## 2. Affirmative action policies for the inclusion of the indigenous population at University

According to the Institute of Geography and Statistics (IBGE) 2010 Brazilian census, the indigenous population is almost 900 thousand people, with the country's total population being approximately 212.7 million people. There are 305 ethnicities who speak more than 270 different languages in the Brazilian territory. When it comes to enabling access to educational resources for the indigenous peoples of this country; however, there is still a lot to be done despite some important achievements.

Brazil held 67 federal universities and 39 state universities offering an average of 390 thousand openings in public

higher education in 2020. In 2012, Law No. 12,711 was enacted (Brazil 2012). It established a reservation of places in higher education federal institutions and technical courses for students coming from public schools. This Law enabled low-income, black, mixed-race, indigenous, and people with disabilities to have better conditions to access education. Its Article 3 states that “places must be allocated for people self-declared as black, mixed race, indigenous and quilombola, as well as people with disabilities in each federal higher education institution”. The offer for indigenous entrance exams began in 2001 in Brazil, and in 2006 at UFSCar.

In addition to the quotas determined by law, 32 institutions offer entrance exams aimed exclusively at indigenous candidates – UFSCar among them. Data collected by the Higher Education Census of the Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep) indicate that 57,706 indigenous people were enrolled in higher education in 2018. This is a 695% increase when compared to the initial implementation years of affirmative action policies and indigenous entrance exams in Brazil, which began in 2010 (Luciano and Amaral 2021).

UFSCar is a Brazilian federal university founded in 1968 with 4 campuses spread across the interior of the state of São Paulo offering a total of 64 undergraduate courses and 52 postgraduate programs. It was only in 2008 that there was an official record of the presence of indigenous peoples at this university. This fact itself attests to the results of implementing the Indigenous Entrance Exam by the university. Since the first edition of this entrance exam, more than 60 different indigenous ethnicities have passed through the university. The year of 2023 saw the largest number of registrations for this entrance exam, which is currently carried out in partnership with Universidade de Campinas (Unicamp). There were 3,480 applications for the 130 openings at UFSCar and the 130 places at Unicamp. There are approximately 400 indigenous students with active enrollment at UFSCar at the moment. In 2016, the affirmative action policy aimed at postgraduate studies was approved at this institution. Due to the recent nature of this implementation, the presence of indigenous students in graduate studies is small, but growing. It is safe to affirm that scientific production produced by indigenous peoples will only increase when considering the implemented policies and the systematic increase in the entry of indigenous students into Brazilian undergraduate and postgraduate studies. This creates a demand that the storage systems and organization of academic scientific production be readily represented and recovered, thus giving greater visibility to indigenous languages, ethnicities, and authorship.

It is thus agreed that public universities – especially in countries affected by colonizing processes – cannot be another place for the Coloniality of Being (Nelson Maldonado-Torres and Walter Mignolo), Power (Aníbal Quijano),

or Knowledge (Santiago Castro-Gómez) and must then be constituted as Pluriversity of Knowledge (Boaventura de Souza Santos). The justifications for actions aimed at expanding and qualifying diverse participation, especially that of the indigenous population in scientific production spaces, are multiple. These include issues of an environmental nature and the preservation of ways of life, social relations, society, and nature – which according to the conception of indigenous peoples, cannot be seen separately.

As such, libraries, archives, museums, and different information units occupy a central place in promoting cognitive justice in countries victims of colonial oppression. For example, the Indigenous Matters Section was created within the International Federation Library Association (IFLA) with the aim of supporting culturally responsive and effective services to indigenous communities around the world. The section promotes international cooperation in libraries, culture, knowledge, and information services to meet the cultural, linguistic, and community needs of indigenous communities. Furthermore, it encourages indigenous leadership, exchange of experiences, education, training, and research.

### 3. Indigenous languages and knowledge organization systems

Significant academic work has also been produced, especially within the scope of Knowledge Organization in an attempt to mitigate the side effects from the imposition of systems, languages, models of representation, and information retrieval which can either optimize or render indigenous knowledge invisible.

An important work to mention, as a starting point, is Doyle's (2013) doctoral thesis titled Naming, claiming, and (re)creating: Indigenous knowledge organization at the cultural interface. The thesis will demonstrate that prevailing knowledge organization systems (KOS) within libraries frequently encounter substantial difficulties in the representation and organization of documents containing Indigenous content. These difficulties underscore a deficiency in traditional approaches, which may inadequately address the complexities and nuances inherent in Indigenous perspectives. Nonetheless, conceptual, theoretical, and methodological approaches derived from Indigenous knowledge have the potential to offer innovative directions for the design and development of KOS.

Recent research developed by Littletree et al. (2020) addresses the need to create a Conceptual Model to Advance Indigenous Knowledge Organization Practices. The authors expose the limitations of traditional Euro-American approaches to Knowledge Organization (KO) when dealing with indigenous issues. They indicated an urgency for professionals working with KO to understand indigenous per-

spectives on an epistemological level. Within this context, another work was published in the Proceedings from the North American Symposium on Knowledge Organization by Lee et al. (2021) entitled 'Comparing the Cataloguing of Indigenous Scholarships: First Steps and Findings'. In this work, an analysis of terms within the Library of Congress subject heading was made on the term "Indian". The research highlights two main issues related to the continued use of current LCSH terms. First, they are ambiguous and limit the effectiveness of an institutional catalog. Secondly, these terms do not reflect how Indigenous Peoples, Nations, and Communities in North America.

Villanueva (2021), in 'Language Subject Access to Indigenous Materials: The Philippine Cordillera Case', examines the limitations of the Library of Congress Subject Headings (LCSH) in assigning access terms to Indigenous materials from the Cordillera region of the Philippines. The article identifies a significant challenge: many Indigenous terms lack direct equivalents in English or other Western languages, which impedes both the cataloguing and efficient retrieval of these materials. Additionally, issues such as variations in spelling and local nomenclature further complicate the indexing process. To address these challenges, Villanueva proposes several solutions and steps aimed at improving the searchability and accessibility of these materials, striving to overcome existing barriers and enhance information access. prefer to represent themselves as individuals or collectives. Andersen and Skouving (2017) report on the challenges of incorporating the specificities of the Maori language into Organization of Knowledge systems in the book 'Classification and decolonisation of Maori Subjects', published in The Organization of Knowledge: Caught Between Global Structures and Local Meaning.

Another work that problematizes bibliographic classification systems in terms of indigenous issues was developed by Green (2015), entitled 'Indigenous Peoples in the U.S., Sovereign Nations, and the DDC'. The author investigated the DDC in editions 16 to 23, and demonstrated some actions already developed on code tables in order to minimize inconsistencies in the classification structures on indigenous peoples. The research developed by Adler (2016), entitled 'The Case for Taxonomic Reparations', recognizes that static structures in bibliographic classification systems end up highlighting processes through which violence became systemic, especially in relation to eugenics. As a result, it proposes the creation of reparative taxonomies and uses the cases #BlackLivesMatter and the Transgender Digital Archive to exemplify possibilities in the construction and use of liberatory descriptive standards that are transparent, hold creators accountable, and invite user participation in the co-creation of records.

There have also been important decolonization movements in relation to collections within museums and ar-

chives. Turner (2016), in her work on Organizing Knowledge in Museums, calls attention to the practical and intellectual issues raised when other forms of knowledge meet museums systems (472). Furthermore, the author contextualizes the study of museums within Foucaultian thought and other concepts that help understand the standardization of systems via institutional repositories, as these are increasingly being digitized and disseminated across varied communities. In his article Ethical Issues from Decolonial Practices in Knowledge Organization: The Case of Indigenous Collections in Världskulturmuseet, Sundström (2023) presented the case of the Museum of World Culture (Världskulturmuseet), which has revised its knowledge organization system – especially with regard to the classification and use of terminologies on indigenous people in their database known as Carlotta. The research confirmed that the museum used inappropriate and obsolete terms to describe some of the objects in the indigenous collection and concluded that indigenous self-determination in cultural institutions is essential so that ethical issues related to the creation of a knowledge organization system in a museum can be respected. In the archival field, the report by Gilliland (2012) 'Contemplating Co-creator Rights in Archival Description' debated the ethics and rights of co-creators while seeking to highlight how indigenous conventions can be incorporated into archival descriptions as resources to recognize the co-creation of documents. The author concluded that it is necessary to rethink archival descriptive practices and standards so that they can consider ethical and power differences that may manifest within the archival multiverse.

Given this briefly announced context, this research addresses the research gap on library information systems for recording and retrieving information that can enhance the descriptive and thematic representation of indigenous knowledge produced in Brazilian public universities while considering their original cosmogony as structuring elements of metadata representation. Among these systems, the research is dedicated to analyzing and making propositions for structuring "decolonial metadata" in Institutional Repositories.

Studies dedicated to Institutional Repositories have aroused growing interest in the field of Information Science, and it is possible to affirm that it composes the majority scientific knowledge produced on the subject in the world (Bazilio 2022). Specifically within this field, a significant production of research has been developed in Knowledge Organization Literature Classification Systems (CSKOL) (Alves et al. 2022; Fujita 2022; Fujita et al. 2022; Fujita et al. 2023; Fujita and Panuto 2024; Fujita et al. Panuto 2024). These are dedicated to the qualification of indexing processes of archived content in Institutional Repositories, since this process directly impacts the way in which

registered scientific knowledge can be accessed by society. Specifically in relation to UFSCar's IR, Freitas (2019) analyzed the process of representing issues made by authors of scientific works when archiving them. The research conclusively indicated that policies, and even metadata structures, still deserve more attention in order to provide opportunities for more inclusive protocols in cataloging, indexing and use of language in representation processes and content description.

Preliminary studies on indigenous representation at UFSCar have identified and discussed the gap that gave rise to this research proposition. It was presented during ISKO Brasil 2023 in Londrina – Paraná – and later published in Anais do Congresso (Gracioso et al. 2023) and presented at the VII Information, Data, and Technology Workshop, held in 2024 in Porto Velho – Rondônia (Periotto et al. 2024).

#### **4. Metadata for the preservation and appreciation of knowledge from original peoples – legal starting points**

Brazil has only one official language – Portuguese. The processes and paths that shaped this institutionalization are complex and result from radical colonization strategies by the Portuguese nation over the population of Pindorama. Records indicate that there were more than 1000 languages being spoken in Brazilian territory before the colonization process. From 1500 to 1750, many of the surviving languages still coexisted and survived alongside the imposed Portuguese language, with the Tupi language predominating in the coastal regions and Nheengatu in the Amazon. A Portuguese Royal Provision prohibited the use of Tupi in 1757 and established Portuguese as the official country's language. In 1759, the use of original languages by indigenous peoples was criminalized. It was only 200 years later that social organization, customs, languages, beliefs, and indigenous traditions were recognized with the publication of the 1988 Constitution of the Federative Republic of Brazil (article 231).

Currently, there has been a growing investment in the country for the socio-political inclusion of indigenous peoples in different instances. This includes discussion about the right to use original languages, as well as the set of legal standards that regulate the use of languages and the exercise of linguistic rights in Brazil. These can be accessed via the Brazilian Repository of Linguistic Legislations (RBLL), developed in partnership with the Institute for Research and Development in Linguistic Policy (IPOL). More than 35 years after the publication of the 1988 Constitution, the Brazilian Federal Supreme Court launched the first Brazilian Constitution translated into the indigenous Nheengatu language "*MUNDU AS TURUSU*" *WAA UBÉUWA*

*MAYÉ MÍRA ITÁ UIKÚ ARÁMA PURÁGA IKÉ BRAZIU UPÉ*".

Of the more than 270 indigenous languages in Brazil, only 13 are currently recognized as co-official in 10 Brazilian municipalities (of the more than 5,000 municipalities in the country). The co-official indigenous languages and the respective laws that regulate their use are described in the Table 1, prepared by the Institute for Research and Development in Linguistic Policy.

In addition to the right to use their languages, advances have also been made in the rights of indigenous peoples to self-determine. These were developed both internationally via the 169<sup>th</sup> International Labor Organization Convention (ILO) of 1989, and nationally via the 1988 Federal Constitution. More recently, this has also been achieved via Resolution No. 3 of 2012 of the National Council of Justice, which guarantees original communities the right to rectify Brazilian names for indigenous people in the Civil Birth Registry (RCN) as a record made in the Civil Registry Offices of Natural Persons – provided for and regulated by Law 6,015/73. Article 2 of the joint Resolution CNJ/CNMP nº 03/2012 ensures that in Civil Birth Registers "the indigenous name of the registrant, of his/her free choice, must be entered at the request of the applicant (...)" . Likewise, indigenous people who want to correct their already registered names, or change them to add the people or ethnicity, can request such a change from the registry offices. Furthermore, according to Joint Resolution No. 3, of April 2012, an indigenous ethnicity can be entered as a surname, if a person so chooses. The village of origin of the indigenous person and that of their parents may be included as information regarding their respective places of birth, along with the municipality of birth. According to Art. 42, VI of TSE Resolution No. 23,659/2021 and the ELO System (Brazilian voter registration), it is currently possible for the person to identify as indigenous, enabling one to declare their identity, ethnicity, and indigenous language (self-declaratory information) in the system.

As such, it is possible to see that actions have been taken – largely due to the demands from indigenous peoples for their rights – in an attempt to minimize the side effects of colonization processes that almost extinguished indigenous bodies, places, languages, and cultures in Brazil. This ensures that we will not only be doing due cognitive and authorial justice, but also practicing the Law when creating metadata for adequate representation of indigenous scientific production in open and free information systems such as Institutional Repositories.

| Language             | Municipality                  | Law – Year                             |
|----------------------|-------------------------------|--|
| Baniwa               | São Gabriel da Cachoeira (AM) | Law n. 145/2002                        |
| Neengatu             | São Gabriel da Cachoeira (AM) | Law n. 145/2002                        |
| Tukano               | São Gabriel da Cachoeira (AM) | Law n. 145/2002                        |
| Ianomami             | São Gabriel da Cachoeira (AM) | Law n. 0084/2017                       |
| Guarani              | Tacuru (MS)                   | Law n. 848/2010                        |
| Akwê-Xerente         | Tocantínea (TO)               | Law n. 411/2012                        |
| Macuxi               | Bonfim (RR)                   | Law n. 211/2014                        |
|                      | Cantá (RR)                    | Law n. 281/2015                        |
| Wapichana            | Bonfim (RR)                   | Law n. 211/2014                        |
|                      | Cantá (RR)                    | Law n. 281/2015                        |
| Mebêngôkre/Kayapó    | São Felix do Xingu (PA)       | Law n. 571/2019                        |
| Tenetehara/Guajajara | Barra do Corda (MA)           | Law n. 900/2020                        |
| Tikuna               | Santo Antônio do Içá (AM)     | Law n. 298/2020                        |
| Tupi-nheengatu       | Monsenhor Tabosa (CE)         | Law n. 13/2021                         |
| Terena               | Miranda (MS)                  | Law n. 1.382/2017<br>Law n. 1.417/2019 |

Table 1. Co-official indigenous languages in Brazilian municipalities.

Source: List of co-official languages in Brazilian municipalities | IPOL.

## 5. Digital Repositories: preservation, recovery, and access to scientific knowledge

The open access movement has brought an expansion and popularization of digital academic and technical-scientific work repositories, among other types of materials available. This operates mainly in universities and research centers. “The expression ‘digital repositories’ [...] is used to describe the various types of data provider applications that are intended for the management of scientific information, constituting alternative routes of scientific communication.” (Leite 2009, 19). According to Torino (2017, 94):

Digital repositories (RDs) are open and interoperable information systems intended for the management of scientific and academic information. These are capable of storing files of different formats, and constitute alternative ways of scientific communication while increasing production visibility.

The *Conselho Nacional de Arquivos* (2023, 12, translated by the authors) reiterates that the digital repository is “a system that supports the management of digital materials for as long as necessary, and is made up of hardware, software, and metadata, as well as an organizational infrastructure with normative and technical procedures” (p.9). Gonçalez (2017, 79-82) adds that digital repositories are made up of digital collections that can be built in different ways and purposes, but that the action of designating the creation of

a digital repository favors the storage of a large number of documents. These must be capable of managing and storing collections of digital objects for long periods with appropriate access conditions.

Institutional repositories are digital platforms maintained by academic institutions such as universities, research institutes, libraries, and documentation centers. These repositories are designed to store, preserve, and make the intellectual and scientific production by the academic community available. They generally provide a variety of content such as journal articles, theses, dissertations, research reports, research datasets, and other forms of academic production.

Institutional repositories play a crucial role in promoting open science because (i) they facilitate free and immediate access to scientific knowledge, allowing researchers, students and the general public to consult, read, and use research results without financial or technical restrictions; (ii) provide a safe and reliable place to store and preserve research results over time, thus ensuring that scientific knowledge is not lost and remains available for future generations; (iii) visibility and impact increases by making an institution’s research works available, as results can be easily found and accessed by other researchers, collaborators, and other interested parties around the world; (iv) allow institutions and researchers to comply with funding agency policies that require publicly results to be made available in open access;

(v) facilitate collaboration and networking between researchers, allowing them to share their work, ideas, and resources, promoting a more collaborative and productive research environment.

Institutional Repositories are defined based on their characteristics, application and intended objectives (Torino 2017, 95) and can be divided into institutional, thematic, archival, data, and other categories. According to Leite (2009, 21), an institutional repository is “a scientific information service in a digital and interoperable environment dedicated to managing an institution’s intellectual production.” Thematic repositories correspond to the management of material grouped by a common subject.

Many solutions were created in order to enable the management of digital documents for digital repositories, DSpace stands out among them. DSpace (n.d.) is a free, open source software developed by the Massachusetts Institute of Technology (MIT) library in conjunction with Hewlett-Packard (HP) in the early 2000s, but it is now maintained by LYRASIS.

Among DSpace’s main features are: a web-based interface; the possibility of exporting different file formats such as text, images, and digital videos; document curation and management as each file inserted into DSpace has technical information (metadata) that allows digital management and preservation in addition to navigation and indexed items search. “Once an item is located, native Web formatted files can be viewed in a Web browser, while other formats can be downloaded and opened by a suitable application.” DSpace makes it possible to build communities and collections in order to organize the collection. “A community is the highest level of the DSpace content hierarchy.”

Other features of DSpace are:

- Free open source software;
- Fully customizable as to meet user needs;
- Manages and preserves all digital content formats (PDF, Word, JPEG, MPEG, TIFF files);
- Apache SOLR-based search for metadata and full-text content;
- UTF-8 support;
- Interface available in 22 languages;
- Group-based granular access control, allowing one to set permissions to individual files;
- Optimized for Google Scholar indexing.
- New functionalities are developed with each version as to improve data curation management, and the current version of DSpace is 7.6.1.

## 6. Methodological Procedures

The methods used to develop this research were a literature review and applied research. The latter sought to solve an

immediate problem on the need to expand the metadata of the Institutional Repository with the aim of representing more inclusive information.

This research is still exploratory with elements of descriptive research, as it characterizes UFSCar’s institutional environment while describing the indigenous population of this university. It has additional elements from experience reports at the starting point of the research and partial results. We relied on Daltro and Fria (2019) as it explains that the Experience Report is “A scientific narrative in post-modernity” in order to anchor the choice of this methodological resource. The authors indicate that “The documentary construction of an Experience Report implies, *a priori*, that its author(s), or at least one of them, is a participant in the real-life context under study.” (234). As such, this present research is developed by agents composed of librarians and indigenous students who are directly developing, testing, validating, and applying the metadata resources proposed to the RI UFSCar. Another characterizing element of the research as an Experience Report is the fact that, as indicated in Daltro and Faria (2019, 234) “those already affected by the discourse of science can locate the power of theorization for advancement in a certain field of knowledge.”

The study reports some elements of experimental research, since variables in the study’s framework (Institutional Repository) were manipulated. This, in turn, allowed the testing of hypotheses raised in the study.

Even on a preliminary test, the implementations in the Institutional Repository from this research reinforced that these are configured not only as an instrument for archiving and accessing scientific information, but also as a technology for preservation, visibility, appreciation, respect, and strengthening of indigenous knowledge and languages that have historically been silenced and are now threatened.

It is worth mentioning that, in order to carry out these tests, we used the scientific production of one indigenous student linked to the Special Education Course at the São Carlos Campus. The chosen scientific work was an undergraduate research entitled “A’uwe Xavante reports and narratives on Special Education”. The title in the indigenous language is “Rówatsu ‘u duré iwatsu ‘u A’uwe Xavante róbdzanhamri rómnöhöré ípe tsiré”.

## 7. The Institutional Repository at Universidade Federal de São Carlos

The UFSCar Institutional Repository (RI UFSCar) was approved through ConsUni Resolution No. 835, of March 4<sup>th</sup>, 2016, and officially implemented in June 2<sup>nd</sup>, 2016 (Universidade Federal de São Carlos 2016)

The Theses and Dissertations Collection was the first to populate the repository, and originated from the digital collection of the Digital Library of Theses and Dissertations at

UFSCar. The UFSCar Digital Library of Theses and Dissertations began in 2004 and used the Theses and Dissertations Electronic Publication System (TEDE), developed and maintained by the Brazilian Institute of Information in Science and Technology (IBICT). This institution aims to provide for the implementation of digital libraries of theses and dissertations in educational and research institutions and is thus integrated into the Brazilian Digital Library of Theses and Dissertations.

The RI UFSCar was developed on the free software DSpace, using Dublin Core as a metadata standard to provide online open access and visibility to digital items produced in text, image, sound, audiovisual, and other possible formats of intellectual production along with their metadata (Universidade Federal de São Carlos 2024).

As of October 20, 2017, RI UFSCar began to receive theses and dissertations via self-deposit carried out by the student who authored the work.

It was only in February 22<sup>nd</sup> of 2024 that the CO/SIBI Resolution No. 3 began to officially deal with Repository Policy

The UFSCar Institutional Repository (RI UFSCar) aims to organize, store, disseminate, and preserve the intellectual production of teaching and technical-administrative employees; undergraduate and graduate students; other researchers, and editorial labels linked to UFSCar, as well as those prepared through agreements or collaboration between UFSCar and other bodies published in authorship or co-authorship (Universidade Federal de São Carlos 2024).

The UFSCar Institutional Repository Policy also determined the self-deposit modality. It is worth mentioning that the UFSCar Institutional Repository is linked to the UFSCar Integrated Library System (SIBi-UFSCar) and managed by the Department of Scientific Production (DePC). The Scientific Production Department has a team of four librarians and technical support from the Information Informatics Secretariat (SIn) to keep the DSpace software active.

The UFSCar Integrated Library System (SIBi-UFSCar) was established in 2014 by Resolution/CoAd nº 069/2014 of November 28<sup>th</sup>, 2014 and is made up of the libraries in the four UFSCar campuses: Araras Campus Library (B-Ar); Lagoa do Sino Campus Library (B-LS); Sorocaba Campus Library (B-So); and Community Library (BCo) (Sistema Integrado de Bibliotecas da UFSCar n.d.). Its main actions are focused on administrative and information management policies aiming to support UFSCar's activities. Furthermore, one of the competencies of the UFSCar Integrated Library System (SIBi-UFSCar) is to propose policies and flows to manage the UFSCar Institutional Repository and Periodical Portal.

The first collection implemented in the UFSCar Institutional Repository – Collection of Theses and Dissertations

– currently holds 10,727 dissertation and 5,145 theses. The Research Data Collection was launched in November 2019, and the deposit of research data must be carried out by one of the authors of the dataset with an active link to UFSCar. Currently the Research Data Collection has 81 deposits at RI UFSCar. The Course-Completion Research Collection (TCC) was launched in July 2020; however, in this collection the deposit of the undergraduate TCC must be carried out by the student's teacher-advisor. Currently, the Course Completion Work Collection (TCC) holds 2,759 undergraduate research works in the repository. The last collection to be implemented was the Articles Collection, launched in August 2022. The self-deposit can be carried out by teachers, researchers, administrative technicians and students with an active connection to the University. Currently, the Articles Collection has 93 deposits in the UFSCar Institutional Repository.

Future prospects for implementation at the UFSCar Institutional Repository include the Book and Specialization Course Completion Research Collections.

## 8. Results: Actions and results in the inclusion of the Dublin Core field and metadata for indigenous language representation

A series of issues were analyzed for indigenous languages to be represented in the scientific production at UFSCar. These are for now available at the RI UFSCar test environment, so that such actions can be eventually implemented in the repository.

The main questions, as well as the proposed actions, are explained below:

1. Creation of the field in the Dublin Core metadata scheme that will allow the insertion of metadata on the ethnicity of an indigenous authors (indigenous students and researchers) in the repository submission forms. A consultation was carried out in several institutional repositories in Brazil to check whether any metadata to describe ethnicity had previously been created; however, no example was found. For this purpose, the field "dc.contributor.author ethnicity" was created. At this point, the Dublin Core "dc.contributor" metadata was qualified, as it refers to the person who participates in the resource's artistic or intellectual production. The flexibility of the Dublin Core enables one to qualify existing metadata, as well as to create completely new metadata. As ethnicity is associated with the person, it was considered appropriate to add an "ethnicity" field next to "dc.contributor.author". This is an optional element as it is sensitive information, and its scope of use was established as: Field created to represent the ethnicity of the indigenous author, as shown in Figures 1 and 2.

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- By Issue Date
- Authors
- Advisor
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- Subjects
- CNPq Subjects
- Graduate Program
- Document Type

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## Metadata Schema: "dc"

This is the metadata schema for "http://dublincore.org/documents/dc/terms/". You may add new or update existing metadata fields to this schema. Fields may also be selected for deletion or be moved to another schema.

### Add new metadata field

Field Name: dc .

contributor

authorethnicity

Scope Note:

Field created to represent the ethnicity of the indigenous author

Additional notes about this metadata field.

Add new metadata field

### Schema metadata fields

| ID  | Field               | Scope Note  |
|-----|---------------------|---|
| 170 | dc.citation.edition | Campo criado para Form de Livros - Número da edição     |
| 167 | dc.citation.issue   | Campo criado para Form de Artigos - Número do periódico |

Figure 1. Inclusion of the “dc.contributor.authorethnicity” field in the Dublin Core scheme

Source: UFSCar Institutional Repository – internal pre-test interface.

|                          |     |                                |  |
|--------------------------|-----|--------------------------------|--|
| <input type="checkbox"/> | 134 | dc.contributor.advisor1Lattes  | Padrão IBICT para teses e dissertações   |
| <input type="checkbox"/> | 171 | dc.contributor.advisor1orcid   | Campo para URL do ORCID do orientador  |
| <input type="checkbox"/> | 3   | dc.contributor.author          |  |
| <input type="checkbox"/> | 173 | dc.contributor.authorethnicity | Field created to represent the ethnicity of the indigenous author                            |
| <input type="checkbox"/> | 162 | dc.contributor.authorlattes    | Campo para URL do Lattes do autor criado para os formulários de TCC, T&D e Dados de Pesquisa |
| <input type="checkbox"/> | 169 | dc.contributor.authororcid     | Campo para URL do ORCID do autor criado originalmente para o formulário de Livros            |

Figure 2. “dc.contributor.authorethnicity” field included in the Dublin Core scheme.

Source: UFSCar Institutional Repository – internal pre-test interface.

2. Definition of the name and description of the “dc.contributor.authorethnicity” field for item submission forms to the RI UFSCar. The field is available right after the Author field in the item submission forms, and the options for the field name and description have already been presented for consideration, as observed: (i) Ethnicity of the indigenous author or Ethnicity of the author; (ii) Enter the ethnicity of the indigenous author (without abbreviations). Use capital letters only at the beginning of words. Example: Xavante. For each ethnicity, click the Add button or Enter the author’s indigenous ethnicity (without abbreviations) only in cases of admission to UFSCar through the Indigenous

author or Ethnicity of the author; (ii) Enter the ethnicity of the indigenous author (without abbreviations). Use capital letters only at the beginning of words. Example: Xavante. For each ethnicity, click the Add button or Enter the author’s indigenous ethnicity (without abbreviations) only in cases of admission to UFSCar through the Indigenous

nous Entrance Exam. Use capital letters only at the beginning of words. Example: Guarani. Click the Add button for each ethnicity entered.

3. Identification of ethnicities already registered at UFSCar. An effort was carried out as to identify the ethnicities present at UFSCar, which resulted in a large number found. This diversity allowed the choice of metadata insertion method, where the depositor manually inserts the metadata on the ethnicity to which the author belongs for later validation by the RI UFSCar team. Figure 3 exemplifies the field and metadata referring to ethnicity.

4. Update of self-deposit manuals for all scientific production collections at RI UFSCar, with the inclusion of this new field and its guidelines. It is emphasized that this is not a mandatory field, and that it should only be filled in by indigenous students. In addition to the guidelines provided in the item submission forms, all self-deposit manuals available

for consultation, as well as Instructions to authors guidance will be updated with guidelines for other fields (abstract, keyword, title in another language). Figure 4 shows the possibilities for updating one of the self-deposit manuals. It is possible to observe the respective fields in Table 2.

The “dc.contributor.author” field already provides the insertion of more than one author in all RI UFSCar collections, thus meeting demands related to indigenous collective authorship, if necessary.

It is worth highlighting that it was necessary to analyze how the language identifiers for such metadata would be inserted in addition to the field on the author’s ethnicity and the guidelines for the other fields.

It is necessary to insert the language identifier for the metadata in the following fields during the validation process of items deposited at the UFSCar RI: dc.description.abstract (summary in another language); dc.language.iso (text language); dc.subject (keyword); dc.title (title); and dc.title.alternative (alternative title).

|   |   |     |
|---|---|-----|
| <b>dc.type</b>                          | TCC   | por |
| <b>dc.contributor.advisor1</b>          | Lacerda, Cristina Broglia Feitosa de  |     |
| <b>dc.contributor.advisor1Lattes</b>    | <a href="http://lattes.cnpq.br/9468232016416725">http://lattes.cnpq.br/9468232016416725</a>   | por |
| <b>dc.contributor.advisor-co1</b>       | Corsi, Adriana Maria  |     |
| <b>dc.contributor.advisor-co1Lattes</b> | <a href="http://lattes.cnpq.br/5553922167803121">http://lattes.cnpq.br/5553922167803121</a>   | por |
| <b>dc.description.resumo</b>            | Este trabalho tem início com a minha história de vida na Aldeia Sangradouro, MT, do povo A'uwe Xavante, até chegar na Universidade Federal de São Carlos, como aluno do Curso de Licenciatura em Educação Especial. Com base em artigos sobre a história e a educação do meu povo, publicados por parentes, escrevo sobre o nosso a nossa história, nossa aldeia, a Escola São José de Sangradouro e sobre a Educação Especial. Com o desenvolvimento deste trabalho procuro conhecer como vivem as pessoas com deficiência na aldeia Sangradouro e refletir sobre a possibilidade de ajudar na integração social dessas pessoas. Por meio de conversas informais com parentes e pessoas com deficiência, apresento um pouco de suas histórias e de como vivem na aldeia. Tendo também uma filha com diagnóstico de Deficiência Intelectual, descrevo em profundidade suas relações familiares, suas atividades e o seu desenvolvimento. A partir de um plano desenvolvido para minha filha, descrevo a realização de atividades envolvendo histórias, diálogos, rotinas e convivência com a família e na aldeia. | por |
| <b>dc.publisher.initials</b>            | UFSCar  | por |
| <b>dc.subject.cnpq</b>                  | CIENCIAS HUMANAS::EDUCACAO::TOPICOS ESPECIFICOS DE EDUCACAO   | por |
| <b>dc.publisher.address</b>             | Câmpus São Carlos   | por |
| <b>dc.publisher.course</b>              | Educação Especial - EEspL   | por |
| <b>dc.contributor.authorethnicity</b>   | Xavante   | sai |

Figure 3. Inclusion of the metadata of the indigenous author’s ethnicity.

Source: UFSCar Institutional Repository – internal pre-test interface.

## Edit Item

[Item Status](#)   [Item Bitstreams](#)   [Item Metadata](#)   [View Item](#)   [Curate](#)

**Add new metadata**

**Name:**

dc.contributor.authorethnicity
 ▼

**Value:**

Xavante

**Language**

sai

[Add new metadata](#)

PLEASE NOTE: These changes are not validated in any way. You are responsible for entering the data in the correct format. If you are not sure what the format is, please do NOT make changes.

[Update](#)   [Return](#)

*Figure 4.* Inclusion of the metadata of the indigenous author's ethnicity.  
Source: UFSCar Institutional Repository – internal pre-test interface.

| Dublin Core field  | Field name                            | Field description  |
|--|---------------------------------------|--|
| dc.contributor.authorethnicity<br>(field inclusion)                    | <b>Indigenous author's ethnicity</b>  | Enter the ethnicity of the indigenous author (no abbreviations). Use capital letters only at the beginning of words. Ex.: Xukurú de Ororubá. For each ethnicity, click the Add button.   |
| dc.contributor.author<br>(adequacy of the field filling description)   | <b>Author</b>                         | Enter the author's full name (no abbreviations). Use capital letters only in the initials of first and last names. For each name entered click the Add button. <b>In the case of a social name or indigenous name, use the name as it appears in the UFSCar systems.</b> |
| dc.description.abstract<br>(adequacy of the field filling description) | <b>Abstract in a foreign language</b> | Provide the summary of the work in a foreign language or in an indigenous language (if applicable).  |
| dc.subject<br>(adequacy of the field filling description)              | <b>Keywords</b>                       | Enter the keywords in Portuguese, in a foreign language, and in an indigenous language (if applicable). Use capital letters only at the beginning of words and in acronyms.  |
| dc.title.alternative<br>(adequacy of the field filling description)    | <b>Title in another language</b>      | Enter the title and subtitle in another language. If the title in Portuguese was entered in the previous field, enter the title in English, Spanish, indigenous language, etc.   |

*Table 2.* Creation and description of indigenous language fields in the scientific production by indigenous students.

Source: Prepared by the authors.

The language identifier at RI UFSCar follows the three-digit codes established by the ISO 639-2:1998 standard. Therefore, a consultation was carried out with the data from the Library of Congress (2024), as shown in Table 3: Codes for the Representation of Languages Names and ROSSIO Vocabularies. This follows the determinations in ISO 639-2:1998 for the best option to represent the metadata inserted in the indigenous language.

As shown in Table 3, there was an attempt to gather all language identifiers of the indigenous languages present at UFSCar; however some such as Kambeba, Lanawá, Manchineri and Wassu Cocal were not identified in the sources. As such, a language identifier of South American Indian languages was established due to the countless number of languages identified. This was made in an effort to anticipate a possible difficulty in identifying these languages when validating the work of indigenous students, and is represented by the acronym sai, which will be used for all the words and texts inserted in the RI UFSCar in any indigenous language.

5. Manual and retrospective insertion of the Dublin Core field and the mentioned metadata for items deposited in the RI UFSCar prior to the implementation of the “dc.contributor.authorethnicity” field. Mapping will be carried out to identify Course Conclusion research work, Dissertations, and Theses of indigenous authorship, so that it is possible to contact the author and manually insert the metadata for indigenous ethnicity; summary, keywords and title in the indigenous language, as shown in Figures 5, 6, and 7.

The inclusion of ethnicity metadata is a demand from indigenous students at UFSCar and will enable not only its more effective recovery, but the studies developed by them, with a more reliable description of their scientific and academic production at the university.

Figure 7 illustrates how the summary in the indigenous language stands out on the main page of items deposited at RI UFSCar.

The inclusion of all metadata presented in a course completion research contributes to the reliable representation of the indigenous ethnicity in scientific production.

## 9. Final Considerations

This research aimed to diagnose, make propositions, and pre-test the inclusion of metadata for the representation of indigenous scientific production in an Institutional Repository (IR) of a Brazilian Federal University. The research fulfilled its objective, demonstrating a mirroring of the system on a pre-test where metadata was implemented. It is worth mentioning that the inquiry which led to this study was guided by indigenous students at UFSCar.

The UFSCar Institutional Repository initially carried out several studies to adapt the representation established

from Dublin Core in the DSpace Software. There were discussions on how the UFSCar Institutional Repository could expand its possibilities for searching and retrieving information while respecting the various institutional guidelines, policies, and legislation on the subject.

The inclusion of ethnicity metadata to facilitate the search and retrieval of information on certain groups and studies by indigenous researchers was suggested, as well as allowing the representation of ethnicity by indigenous authors in UFSCar's scientific production. Other solutions were proposed, such as enabling the inclusion of the indigenous name in the repository. The inclusion of a summary, keywords, and title in the native language was also provided with their appropriate linguistic coding, thus maintaining the integrity and consistency of the information in the repository. The use of international coding in addition to maintaining standardization guarantees efficient interoperability with other information systems.

It is important to highlight that the implementation of the ethnicity of indigenous author field, as well as the inclusion of other metadata in the indigenous language should not be thought only for the repository of this institution, but rather for other public institutions or other types of repositories. This allows the representation of indigenous ethnicities in scientific and academic production to be widely disseminated in all areas of knowledge, thus implementing cognitive and authorial justice, as well as putting the Law into practice.

All implementations made in the test environment will allow the UFSCar repository to truly be thought of as an instrument for archiving and accessing scientific information. It is also a means of preservation, visibility, appreciation, respect, and strengthening of languages and indigenous knowledge that are currently under threat.

## Acknowledgements

To the National Council for Scientific and Technological Development (CNPq) for granting scholarships. To the indigenous students of UFSCar, for providing information that validated the development of the research.”

## References

Adler, Melissa. 2016. “The Case for Taxonomic Reparations”. *Knowledge Organization*, 43, no. 8: 630-40. <https://doi.org/doi.org/10.5771/0943-7444-2016-8-630>

Alves, Lizandra de Sousa Santos, Roberta Cristina Dal'Evedo and Mariângela Spotti Lopes Fujita. 2022. “Avaliação do uso de vocabulário controlado em repositórios institucionais”. *Informação@Profissões* 11, no. 1: 52–77. <https://doi.org/10.5433/2317-4390.2022v11n1p52>

| English Name of Language | ISO 639-2 Code | Definition  |
|--------------------------|----------------|---|
| Apuriná                  | apu            | Apuriná is a Southern Maipurean language spoken in Amazonia by the Apuriná people.  |
| Arapaso                  | arj            | -   |
| Bakairí                  | bkq            | Bakairí (Bacairí) is a Cariban language of Brazil.  |
| Baniwa                   | bwi            | Baniwa (Baniva), or Baniwa from Içana (Baniua do Içana), is an Arawakan language spoken in Amazonas, Brazil, and in Venezuela.  |
| Baré                     | bae            | Baré (Barawana) is an Arawakan language, probably extinct, from Venezuela and Brazil. Aikhenvald (1999) reports "just a few old speakers left" of proper Baré, and that the Guinau variety was extinct. Ethnologue (2009) reports "no known speakers". Kaufman (1994) considers Baré proper, Guinau, and extinct Marawá to be distinct languages; Aikhenvald considers them dialects of a single language. (Marawá is not the same language as Marawán).        |
| Canela                   | ram            | Canela is a Ge language spoken in Brazil.   |
| Cocama language          | cod            | Cocama (Kokáma) is an indigenous language spoken by thousands of native people in western South America. It is spoken along the banks of the Northeastern lower Ucayali, lower Marañón, and Huallaga rivers and in neighboring areas of Brazil and an isolated area in Colombia. There are three dialects. The robust dialect is known as Cocama, Kokama, Ucayali, Xibitaao, Huallaga, Pampadeque, and Pandequebo.  |
| Cubeo                    | cub            | The Cubeo language (otherwise known as Cuveo, Hehenawa, Kobeua, Kobewa, Kubwa, or Pamiwa) is a SOV language spoken by the Cubeo people and is a member of the central branch of the Tukano language. It has many lexical loans from the Nadahup languages and has a grammar which was apparently influenced by Arawak. The language is spoken in the Vaupés department, Cuduyari, and Querarií rivers and tributaries of Colombia. It is also spoken in Brazil. |
| Guajajára                | gub            | -   |
| Guanano                  | gvc            | Guanano (also Wanano) is a Tucanoan language spoken in the northwest part of Amazonas in Brazil and in Vaupés in Colombia.  |
| Guarani                  | grn            | -   |
| Guarequena               | gae            | Guarequena (Warekena) is an Arawakan language of Brazil and Venezuela. It is one of several languages which goes by the generic name Baré.  |
| Irantxe                  | irn            | Irantxe (Iranxe, Iranshe), also known as Münkü (Mýky), is an indigenous American language that is spoken in Mato Grosso, Brazil by about 200 people.  |
| Kadiwéu                  | kbc            | Kadiweu is a Mataco-Guaicuru language spoken by 1,200-1,800 people in Brazil. It is mainly a subject–verb–object language and its ISO 639-3 code is kbc.  |
| Kaingang                 | kgp            | The Kaingang language (also spelled Kaingáng) is an indigenous language belonging to the Gê language family spoken in the South of Brazil. The Kaingang nation has about 30,000 people, and about from 60% to 65% speak the language. The majority also speaks Portuguese.  |
| Kayabí                   | kyz            | Kayabí (Caiabi) is a Tupian language of Matto Grosso, Brazil.   |
| Kayapó                   | txu            | Kayapó, also known as Mêbengokre, is a Ge language of Brazil. The majority are monolingual, and most who are bilingual speak other indigenous languages; perhaps 1% speak Portuguese.   |
| Kamayurá                 | kay            | The Kamayurá language (Kamaiurá in Portuguese) belongs to the Tupi-Guarani family and is spoken by the Kamayurá people of Brazil, who numbered about 290 individuals in 2004.   |
| Kambiwá                  | xbw            | Kambiwá Cambioá is an extinct unclassified language of Brazil. A couple dozen words were collected from two people in the 1960s, but by that time no-one spoke the language any longer. Apart from two apparent borrowings, none of the words are relatable to known languages.   |
| Krenak                   | kqq            | The Krenak language, or Botocudo, is the moribund sole surviving language of a small family believed to be part of the Macro-Gê languages. It was once spoken by the Botocudo people in Mato Grosso, but is now only known by older women.  |
| Macuna                   | myy            | -   |
| Macushi                  | mbc            | Macushi is the most populous of the Cariban languages, spoken by 30,000 in Brazil and Guyana. It is also spelled Makushi, Makusi, Makuxi, Macusi, Macussi, and also known as Teweya (Teueia).   |
| Marúbo                   | mzr            | Marúbo is a Panoan language of Brazil.  |

Table 3. Indigenous Language identifiers (*to be continued*).

Source: Prepared by the authors from Library of Congress and Vocabos ROSSIO (2024).

| English Name of Language               | ISO 639-2 Code | Definition   |
|--|----------------|--|
| Matsés                                 | mcf            | The Matsés language (sometimes called Mayoruna) is an indigenous language of the Peruvian and Brazilian Amazon basin which belongs to the Panoan language family.  |
| Nhengatu                               | yrl            | The Nheengatu language (in original Tupi pronunciation), often spelled Nhengatu, is an Amerindian language of the Tupi–Guarani family. It is also known by the Portuguese names língua geral da Amazônia and língua geral amazônica, both meaning "Amazonian General Language," or even by the Latin lingua brasiliaca (Brazilian Language). Nheengatu originated in northern Brazil in the 17th century as a lingua franca. Now known as nheengatu (also nhengatu, nyengatú, língua geral, geral, yeral), it is still spoken along the Rio Negro in northern Brazil (as well as in neighboring Colombia and Venezuela). |
| Pataxó language                        | pth            | Pataxó or Pataxó Há-Há-Háé is an extinct native language of Brazil formally spoken by the Pataxó people of the Bahía region and Minas Gerais, Pôsto Paraguassu in Itabuna municipality. It is unclassified. The 2,950 individuals in the Pataxó tribe now speak Portuguese. Pataxó Há-Há-Háé was also known as Patashó, Pataxi, and Pataxó-Háhaái.   |
| Pemon                                  | aoc            | The Pemon language is a Native American language of the Cariban family spoken by some 30,000 Pemon people, in Venezuela's Southeast, particularly in the Canaima National Park, in the Roraima State of Brazil and in Guyana.  |
| Piratapuyo                             | pir            | -  |
| Rikbaktsa                              | rkb            | The Rikbaktsa language, also spelled Aripaktsa, Erikbatsa, Erikpatsa and known ambiguously as Canoeiro, is a language spoken by the Rikbaktsa people of the Mato Grosso, Brazil, that forms its own branch in the Macro-Gê languages.  |
| <b>South American Indian languages</b> | <b>sai</b>     | -  |
| Suruí                                  | sru            | Suruí, Paíter or Suruí-Paíter, is a Tupian language of Brazil.   |
| Tariana                                | tae            | Tariana (also Tariano) is an endangered Maipurean language spoken along the Vaupés River in Amazonas, Brazil by approximately 100 people. Another approximately 1500 people in the upper and middle Vaupés River area identify themselves as ethnic Tariana but no longer speak the language.  |
| Tembé                                  | tqb            | -  |
| Tereno (Terêna language)               | ter            | Terêna or Etelena is spoken by 15,000 Brazilians. The language has a dictionary and written grammar. Many Terênan people have low Portuguese proficiency. It is spoken in Mato Grosso do Sul. 20% are literate in their language, 80% literate in Portuguese.  |
| Ticuna                                 | tca            | Ticuna, or Tikuna, is a language spoken by approximately 40,000 people in Brazil, Peru, and Colombia. It is the native language of the Ticuna people. Ticuna is generally classified as an isolated language, but may be related to the extinct Yuri language. (See Ticuna-Yuri.) It is a tonal language, and therefore the meaning of words with the same phonemes can vary greatly simply by changing the tone used to pronounce them.   |
| Tucano                                 | tuo            | Tucano (also Tukana, Tucana, Tukano, Dasea, Jurutí, Jurití, Yurutí, Tariana, Tariano, Koneá, Koreá, Patsoka, Wahyara; autonym: Dahseyé) is a Tucanoan language spoken in Amazonas, Brazil, and Colombia.   |
| Tupi languages                         | tup            | Tupiniquim (Tupinaki) is a language which was spoken by Tupiniquim tribesmen in the Brazilian states of Espírito Santo and Bahia, and belonged to the Tupi–Guarani language family. It is now extinct. Its former speakers have switched to Portuguese. Alternative terms for the concept: Acatepec Tlapanec; Me'phaa, Acatepec; Tlapanec, Acatepec; Tupiniquim language.  |
| Tuyuca                                 | tue            | Tuyuca (also Dochkaufara, Tejupa, Tuyuka, Dojkapuara, Doxká-Poárá, Doka-Poara, or Tuiuca) is an Eastern Tucanoan language (similar to Tucano) spoken by the Tuyuca people. The Tuyuca are an indigenous ethnic group of some 500-1000 people who inhabit the watershed of the Papuri, Inambú, and Tiquié rivers in the Colombian department of Vaupés and the Brazilian state of Amazonas.   |
| Xakriabá                               | xkr            | Xakriabá (also written Chakriaba, Chikriaba, Shacriaba) is an extinct Ge language formerly spoken in Minas Gerais, Brazil by the Xakriabá people, who today speak Portuguese.  |
| Xavánte                                | xav            | The Xavante language is a Ge language spoken by the Xavante people in about 170 villages in the area surrounding Eastern Mato Grosso, Brazil. The Xavante language is unusual in its phonology, its object–subject–verb word order, and its use of honorary and endearment terms in its morphology.  |

Table 3 continued

| English Name of Language | ISO 639-2 Code | Definition  |
|--------------------------|----------------|---|
| Wapishana                | wap            | Wapishana (Wapixtana) is an Arawakan language of Guyana and Brazil.                                     |
| Wasu                     | wsu            | Wasu (Waçu, Wassú) is an extinct unclassified language of Brazil. The ethnic population is about 1,500. |

Table 3 continued

|                         |   |
|-------------------------|---|
| dc.identifier.citation  | WAWEMRA, Eudócio Tserewiwe. Relatos e narrativas A'uwe Xavante em diálogo com a Educação Especial. 2021. Trabalho de Conclusão de Curso (Graduação em Educação Especial) – Universidade Federal de São Carlos, São Carlos, 2021. Disponível em: <a href="https://repositorio.ufscar.br/handle/ufscar/15784">https://repositorio.ufscar.br/handle/ufscar/15784</a>   |
| dc.identifier.uri       | <a href="https://repositorio.ufscar.br/handle/ufscar/15784">https://repositorio.ufscar.br/handle/ufscar/15784</a>   |
| dc.description.abstract | Este trabajo comienza con mi historia de vida en Aldeia Sangradouro, MT, del pueblo A'uwe Xavante, hasta llegar a la Universidad Federal de São Carlos, como estudiante de la Licenciado en Educación Especial. Basado en artículos sobre la historia y la educación de mi gente, publicado por familiares, escribo sobre nuestra historia, nuestro pueblo, la Escuela São José de Sangradouro y sobre Educación Especial. Con el desarrollo de este trabajo Trato de conocer cómo viven las personas con discapacidad en el pueblo de Sangradouro y reflexionar sobre la posibilidad de ayudar en la integración social de estas personas. A través de conversaciones informales. con familiares y personas con discapacidad, les presento algunas de sus historias y cómo viven en el pueblo. Teniendo también una hija diagnosticada con Discapacidad Intelectual, describo en profundidad de las relaciones familiares, actividades y desarrollo. a partir de una plan desarrollado para mi hija, describo la realización de actividades que involucran historias, diálogos, rutinas y convivencia con la familia y en el pueblo. |
| dc.description.abstract | Író ãmahã Sangradouro Rówatsu 'u inarada iréhã ihoimanadzémnahã ãhã rómhurihã, MT, ñihima a'wẽ remhã A 'wẽ Uptabi Universidade Federal de São Carlos, u ïwitsidzémuhã, niha niha rómhnõré 'wana ihoimanahã curso de Licenciatura em Educação Especial remhã. Ítsiré a 'uwẽ te ãma irópé Rówatsu u rómreme iwétsihã duré rómhnõrénahã ïte a 'uwẽ nahã, watsihoto wate rówatsu 'u, waró ãmahã, rómhnõrédzé São José de Sangradouro duré Educação Especial. Rómuri itsa ëtêna waríni tewaihu 'uda eniha terehoimanadzara Ipótowatsédé daróbremhã Sangradouro duré róbdzanhamri iwaihu 'upe da ãma datsime dahoimanada i aho 're ãhã niwamnõri. Róbdzanhamri daporepu 'u ãna ïtsiré a 'uwẽ ma duré niwamnõri ipódó aimawi wahoíré tsuruna ite rówatsu 'u duré eniha terehoimanadzara daróbremhã. Duré ïra iréwa date iwaihu i 'rã iboi õ, wawatsu uwẽ ihoimanadzé tinanõrimehã, watsihoto rómuri tenatsi i amanhãrì dzé rówatsu udzéma, róbdzanhamri, ihoimanadzé duré itsimirómuri titsitsãnavã nõri mehã daróbremhã.  |

Figure 5. Inclusion of other metadata in the indigenous language.

Source: UFSCar Institutional Repository – internal pre-test interface.

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|                      |   |     |
|----------------------|---|-----|
| dc.language.iso      | por   | por |
| dc.publisher         | Universidade Federal de São Carlos  | por |
| dc.rights            | Attribution-NonCommercial-NoDerivs 3.0 Brazil   | *   |
| dc.rights.uri        | <a href="http://creativecommons.org/licenses/by-nc-nd/3.0/br/">http://creativecommons.org/licenses/by-nc-nd/3.0/br/</a> | *   |
| dc.subject           | Educação Indígena A'uwe Xavante   | por |
| dc.subject           | Educação Especial   | por |
| dc.subject           | História de vida  | por |
| dc.subject           | Rómnhöré A 'wē Uptabi   | sai |
| dc.subject           | Rómnhöré itsipe   | sai |
| dc.subject           | Rówatsu 'u Dahoimanadzépte  | sai |
| dc.title             | Relatos e narrativas A'uwe Xavante em diálogo com a Educação Especial   | por |
| dc.title.alternative | Informes y narrativas A'uwe Xavante en diálogo con la Educación Especial  | spa |
| dc.title.alternative | Rówatsu 'u duré iwatsu 'u A'uwe Xavante róbdzanhamri rómnhöré îpe tsiré   | sai |
| dc.type              | TCC   | por |

Figure 6. Inclusion of other metadata in the indigenous language.

Source: UFSCar Institutional Repository – internal pre-test interface.

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## Relatos e narrativas A'uwe Xavante em diálogo com a Educação Especial

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Este trabajo comienza con mi historia de vida en Aldeia Sangradouro, MT, del pueblo A'uwe Xavante, hasta llegar a la Universidad Federal de São Carlos, como estudiante de la Licenciado en Educación Especial. Basado en artículos sobre la historia y la educación de mi gente, publicado por familiares, escribo sobre nuestra historia, nuestro pueblo, la Escuela São José de Sangradouro y sobre Educación Especial. Con el desarrollo de este trabajo Trato de conocer cómo viven las personas con discapacidad en el pueblo de Sangradouro y reflexionar sobre la posibilidad de ayudar en la integración social de estas personas. A través de conversaciones informales, con familiares y personas con discapacidad, les presento algunas de sus historias y cómo viven en el pueblo. Teniendo también una hija diagnosticada con Discapacidad Intelectual, describo en profundidad de las relaciones familiares, actividades y desarrollo, a partir de una plan desarrollado para mi hija, describo la realización de actividades que involucran historias, diálogos, rutinas y convivencia con la familia y en el pueblo.

Iró ámahá Sangradouro Rówatsu 'u inarada iréhá iholimanadzómnahá áhá rómhurihá, MT, inhima a'wé remhá A'wé Uptabi Universidade Federal de São Carlos, u iwtisidzémuhá, niha niha rómnöré 'wana iholimanahá curso de Licenciatura em Educação Especial remhá. Ítsiré a 'uwé te áma irópê Rówatsu u rómrème iwtisihá duré rómnörénahá ite a 'uwé nahá, watsihoto wate rówatsu 'u, waró ámahá, rómnörédzé São José de Sangradouro duré Educação Especial. Rómhuri itsa éténa waríni tewaihu 'uda eniha tereholmanadzá Ipótowatséé daróbremhá Sangradouro duré róbdzanhamri iwalu 'upe da áma datsime dahoimanada i aho 're áhá niwamnöri. Róbdzanhamri daporepu 'u ána ítsiré a 'uwé ma duré niwamnöri ipóddó aimawi wahoír tsuruna ite rówatsu 'u duré eniha tereholmanadzara daróbremhá. Duré irá iréwa date iwalu i 'rá iboi ô, wawatsu uwé iholimanadzé tinanörimehá, watsihoto rómhuri tenatsi i amanharí dzé rówatsu udzéma, róbdzanhamri, iholimanadzé duré itsimirómhuri tisitsänawá nörí mehá daróbremhá.

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Figure 7. Home page of an indigenous authored item.

Source: UFSCar Institutional Repository – internal pre-test interface.

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