

A framework for designing pedagogical materials in Indigenous languages: examples from Brazil and Mexico

Um framework para projetar materiais pedagógicos em línguas indígenas: exemplos do Brasil e do México

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Abstract: Many language revitalization programs in Latin America rely heavily on instructional settings that require some sort of pedagogical materials. One of the primary challenges for such programs is to produce these materials and incorporate them into consistent practices. This paper presents a framework that can be used to assess the needs and justify the design choices for books, dictionaries, grammars and multimedia products to be incorporated into indigenous language revitalization programs. The examples used to illustrate the deployment of such framework come from two projects, one in Brazil and one in Mexico, to prepare pedagogical grammars in multiple indigenous languages.

Keywords: pedagogical materials; indigenous languages; language revitalization and maintenance.

Resumo: Vários programas de revitalização de línguas indígenas na América Latina estão estruturados em contextos de educação formal que requerem o uso de materiais didáticos. Um dos desafios nesses casos é o da produção desses materiais e da sua inserção nas práticas educacionais existentes. Este artigo apresenta um modelo que pode ser usado para avaliar as necessidades locais e justificar os formatos de livros, dicionários, gramáticas e materiais multimídia que possam ser incorporados em programas de revitalização de línguas. Os exemplos usados para ilustrar este modelo vêm de dois projetos de preparação de gramáticas pedagógicas para várias línguas indígenas no Brasil e no México.

Palavras-chave: materiais pedagógicos; línguas indígenas; revitalização e manutenção da língua.

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1 INTRODUCTION

The need for pedagogical materials in indigenous languages throughout Latin America is widely recognized among teachers, language activists and school officials in native communities². During workshops with language instructors and speakers of indigenous languages in Brazil and Mexico, I frequently hear some recurring questions: How can we prepare pedagogical materials? How to improve the quality of the materials we have? Is there a methodology to help us design and create appropriate textbooks, grammars, dictionaries, etc.? Why don't we have an appropriate material to help us teach our language?

It is not hard to understand the nature of this frustration. Teacher education programs usually focus on pedagogical, political and educational topics that impact language teachers and their work, but often take for granted the materials that are going to be used in the classroom. It is very rare to see specific coursework on designing and preparing pedagogical materials for indigenous languages in Latin America. The closer we find to this topic are courses that introduce pedagogical approaches to teaching language or courses that describe linguistic properties of the languages, but rarely (or never) we find courses dedicated to the creation of textbooks or other pedagogical materials. In all fairness, this is not a unique problem that affects teacher education programs for indigenous languages. This type of courses rarely exists in education programs even for the most commonly taught languages. The problem is just more pronounced for indigenous languages because, differently from languages like Spanish, Portuguese or English, there is no private industry creating materials in indigenous languages for profit, where one can find a multitude of textbooks and other materials available. In most commonly taught languages, when teachers need to adapt or produce their own materials for their classes, they have a variety of models available to them. For indigenous languages, the situation is usually the exact opposite.

The problem is that the knowledge of pedagogical approaches is only one aspect in the complex task of designing a language textbook, for example. There are

² Pedagogical materials and language programs for language revitalization are not only relevant in the Latin American context. In one of the largest studies on language revitalization practices around the world, Perez Baez, Vogel and Patolo (2019) show that language teaching and learning through formal educational contexts are very popular in revitalization programs everywhere.

many other issues that need to be considered in order to create a material that can be useful to students and teachers. For argument sake, let's consider a hypothetical example in which we would propose to create a second language textbook to teach a Latin American indigenous language and we decide that we would like to emulate the communicative strategies commonly used in textbooks for Spanish, Portuguese or English. What sequence of communicative situations would we use? How would we distribute the vocabulary to be learned in each lesson? How would the specific language forms of our target language influence our decision? In order to make these decisions, we can't just copy the sequence of topics/activities found in textbooks for other languages. There is a joke in Brazil that says that every English textbook begins with a lesson on locative sentences like *"the book is on the table."* If we were trying to teach a Tupian language with a very complex system of nominal classifiers or an Otomanguean language with a multitude of positional verbs, we would be hard-pressed not to include such topic from our introductory units to avoid discouraging our students from day one. Notice that this complexity issue would also apply for our communicative and vocabulary goals.

The most common problem found in Latin America when evaluating existing pedagogical materials is due to the resources available and the circumstances in which they have been produced. One usually finds well-intentioned linguists, anthropologists, educators and language instructors who work tirelessly to produce the best materials possible. Nevertheless, sometimes the lack of a more eclectic team, with people bringing in different areas of expertise, leads to materials based on models that are not completely in sync with existing educational needs, a language program or even a sounder way to study the language in question. It is also important to remember that language materials do not (and should not) exist in a vacuum, meaning that they are only useful if they are able to support the language learning efforts established by the communities. While discussing relevant strategies for language revitalization programs, Amaral (2020) describes how pedagogical materials and language instruction have usually fit into more comprehensive goals of reestablishing language use and practice in minoritized language contexts.

This paper aims to contribute to such debate by presenting a framework for practitioners to consider when making decisions about the types of pedagogical materials they would like to develop in the languages they speak or are working

with. The goal is to establish a practical series of questions that can be used by practitioners when making decisions about material development. By consciously discussing these issues, we would hope to avoid some common problems found in language materials for indigenous languages in Latin America.

The framework proposed is generic enough that it can be used in a wide variety of projects, i.e., it is not limited to specific types of materials. It can even be used to justify certain types of books, recordings and language descriptions that are not necessarily to be used in formal educational contexts. In order to illustrate the use of such framework, I will use the Pedagogical Grammars Projects (PGP) that took place in Brazil and Mexico between 2013 and 2018. The Brazilian project was an initiative of the PRODOCLIN, the language documentation program of the *Museu do Índio*, and was sponsored by UNESCO-Brazil. Its director, Professor Bruna Franchetto, invited me to coordinate the work of five different teams of linguists, language teachers and language activists/speakers who worked with five languages: Ikpeng, Karajá, Kawaieté, Paresí and Wapichana. I was also one of the linguists working on the Wapichana grammar at the time, together with Wendy Leandro and Joana Autuori. The work was developed during a series of workshops both in Rio de Janeiro and in several indigenous communities. It started in 2013 and finished in 2015. Four pedagogical grammars with more than 50 units and 250 pages each were prepared and are waiting their publication by the museum (for more details see Lima [2020], Oliveira da Silva, Amaral e Maia [2014]). The Mexican project was directed by Professor Emiliana Cruz, and was sponsored by INALI and the Biblioteca Juan de Córdova in Oaxaca. The project focused primarily on Otomanguean languages and it started with around 80 participants who spoke more than 15 different languages. It started in 2015 and ended in 2018. I was invited to provide training on the development of pedagogical grammars to all participants during the workshops that took place once a year in the city of Oaxaca.

This paper is divided into four sections. After this introduction, section 2 presents a brief discussion about the challenges of preparing pedagogical materials in the Brazilian and Mexican contexts. Section 3 presents the framework itself with examples from the PGP in Brazil and Mexico. Finally, section 4 brings some final remarks and some considerations about using the framework for future and existing projects.

It is important to highlight that this is intended to be a paper for practitioners and people interested in preparing pedagogical materials. I would also like to

point out that although the framework presented here can be used in all contexts where practitioners are developing such materials, some of the comments are specific to situations observed during fieldwork and projects in Brazil and Mexico and may not reflect the experience of revitalization programs in other parts of the world, or even Latin America.

2 PREPARING PEDAGOGICAL MATERIALS

Let's imagine that the process to prepare pedagogical materials begins with a series of decisions about: (i) the type of content to be included, (ii) the way the content will be presented, (iii) the sequence in which the content will be placed, and (iv) the design of the material. These decisions allow us to create a methodology to prepare the desired pedagogical material, which is extremely important from a practical standpoint. One very important aspect of this process is that these decisions need to be explicit and conscious. They cannot be haphazardly made without a clear justification. Previous models/examples are excellent to provide ideas, but we need to remember that they do not provide the justifications to the decision-making process of our individual project. We should avoid the temptation of mindlessly copying some examples we saw in previous books we read or used as learners.

One of the challenges to make conscious decisions about the properties of the materials to be developed is to gather the necessary information about different issues affecting their design. In the context of commonly taught languages, there is a tendency to focus heavily on pedagogical approaches and educational theories that are well-established in those societies. In the context of native Latin American languages, one should take a step back, and look more closely at the material's users, their society and their cultural practices. The challenge is to find a practical way to consider all this information and still arrive at a thought-out decision making process about the properties of the materials we want.

In the next section, we present a framework to help us think about the preparation of a pedagogical material based on six different types of information: (3.1) *the context of use*, (3.2) *the pedagogical goals*, (3.3) *the learner/user model*, (3.4) *the learning theory(ies)*, (3.5) *the pedagogical approach(es)*, and (3.6) *a language theory and a description of the properties of the language we are working with*.

3 THE FRAMEWORK

This framework is intended to support the work of practitioners by helping them become more confident on their decision-making process through a mechanism to evaluate and justify their choices. It is in no way meant to be a deterrent to the implementation of such projects. In a perfect world, we would have all six elements that are listed below perfectly aligned. We would also have a precise answer to each one of the questions presented in this section. In reality, we (almost) never have all of these pieces together, and it does not mean that we should not propose and prepare the pedagogical materials for our projects, much on the contrary. The goal is to make sure we are taking into account different pieces of this puzzle that can significantly impact the end result.

3.1 Context of use

The first element in our list is the *context of use* and it may sound obvious that we should consider it, but unfortunately one can commonly find projects to prepare textbooks, pedagogical dictionaries, grammars or even multimedia materials that pay very little or no attention to the context in which the material is going to be used. When studying such contexts, the more information the better. Anthropologist and educators can be of great help by using their research tools to explore and describe different aspects of the existing educational scenarios. We are here trying to answer some questions such as: *where is the material going to be used? By whom and in which conditions?* Some of the relevant pieces of information may include: the degree of language vitality in the community; the current uses of the language, including the communicative situations in which the language is most likely found; the use of the language by the learners in different everyday scenarios; the existence of formal educational environments for the materials to be used; the presence of teachers who speak the language; the existence of formal language programs and its use in the school system; the educational background of language teachers and their common classroom practices; the support of the community for formal educational approaches to their native language, etc. Moreover, works that discuss how cultural practices are incorporated into pedagogical ones can provide very useful information about some elements that can be used in our materials (cf. e.g.; PEREIRA; GOMES, 2019).

In the case of the PGP in Brazil, it was decided by the language teachers and the local coordinators of the project that the grammars would be primarily used as a supporting material in local middle and high-schools. A specific questionnaire was designed to interview three groups of people: (i) parents and students, (ii) language teachers, and (iii) school administrators. The goal was to gather information about the different context in which the language was used inside and outside of the schools, the attitudes towards the indigenous language instruction, the expectations towards the formal educational system, and the expected proficiency level of school-age learners. The questionnaires, though not comparable to a more thorough ethnographic research, allowed the team of developers to better understand certain characteristics of the environment where the pedagogical grammars were to be used, and in turn, allowed for some more well-informed decisions about the characteristics of the material, the learning theories and the pedagogical approaches that guided the design choices.

It is important to highlight the clear connection between the specific information about the context of use and the other items presented below. A good example of an incoherent material choice sometimes found in Latin America is when the practitioners decide on the creation of early literacy materials with a focus on the spelling and written language to be used with learners that do not speak the language to begin with. Such learners would clearly benefit much more from a second language book where all four basic skills are the focus of instruction, including a more contextualized presentation of vocabulary items. In the next sections, we will see other examples of mismatches that affect the efficiency and usefulness of proposed pedagogical materials.

3.2 Pedagogical goals

Another seemingly obvious topic that is sometimes disregarded in projects is a clear statement of the *pedagogical goals* for the material to be designed. There are many reasons for this to happen. Most of them are the result of the shortage of appropriate resources to cover all needs. In some cases, the scarcity of materials leads to an attitude that anything is good, since we don't have anything at all. Though this can be true in some instances for language documentation and description, in the case of materials that need to be used as pedagogical tools,

the lack of appropriate, clearly stated goals can lead to books that do not address the needs of language teachers and learners. Another very common attitude is to try to create a material (usually a book) that can do it all, from early literacy to second language instruction, documentation and detailed language description of the language. In some cases, it leads to *Frankenstein* materials that are neither one thing nor another³, and end up not being appropriate to any specific goal.

To determine the *pedagogical goals* one must have answered the questions about the *context of use* presented in the section above. Some of the pedagogical goals are truly straightforward and arise from the needs found in the context. For example, in cases where there are very few speakers of the language, it needs to be taught as a second language, such as described by Moraes da Silva (2019) for the Paraketêjê language. In other occasions, it can be more complicated, such as the case presented by Amaral *et al.* (2017), where the Sanöma language is spoken by the whole community, but the formal educational setting works in a slightly different schedule. The early literacy book proposed in that context had to be conceived as a material that could be used by families at home while presenting activities that could also be used in a more formal educational context if the Sanöma teachers decided to do so.

In general, the clearer the *pedagogical goals* of a given material, the easier it is to determine the *pedagogical approach* and its design, as described below. In the case of the PGP in Brazil and Mexico, the teams were asked to brainstorm and create a list of goals for their materials. In Brazil, the responses were more homogeneous, since all teams were designing pedagogical grammars to be used as support materials for students and teachers in formal educational settings. In Mexico, there were a wider variety of goals described by participants, from supporting educational programs for language teachers to providing extra activities for language classes at local schools or community centers. While describing their goals, participants were also asked to think about their target audiences and create a *user model*, as described in the next section (3.3).

³ I once saw a book that was being called a “pedagogical grammar” for a Brazilian indigenous language, in which the content had a little bit of everything. It started with a long list of vocabulary items with translations into Portuguese, but no examples, it then moved to a series decontextualized grammatical explanations in Portuguese and it ended with some dialogues that seemed to be an attempt to emulate communicative second language materials. To this day, I am not sure in which context that book could be used and what its goal was.

Overall, practitioners should avoid rushing into designing their pedagogical materials without reflecting upon the goals they would like to achieve. In sections (3.4) and (3.5), we will see how establishing the context of use and the goals can help us better determine the learning theory and the pedagogical approaches, which will be crucial to deciding on the material design.

3.3 User/learner model

One of the most crucial aspects of developing pedagogical materials is a careful consideration of the intended target audience. In an indigenous context, numerous books, grammars and dictionaries end up left aside, stacked up on shelves of local schools because neither instructors nor students can figure out how to use them. This can be particularly problematic in the case of pedagogical grammars, where sometimes the model used is what could be considered a *dumbed-down* version of a descriptive grammar, usually written in a language that is neither the language being described nor the native language of the intended audience. In other words, when preparing pedagogical materials, we should always ask ourselves: *pedagogical for whom?*

If the material that is being designed is supposed to support learning, then it is highly recommended that practitioners develop what is traditionally called, a *learner model*. This repository of information about the learner has been central to the development of computer-based language teaching in the era of adaptive learning (c.f., e.g.; AMARAL; MEURERS, 2007; HEIFT, 2004; MICHAUD; McCOY, 2004). There are different types of information that should be explicitly described in a learner model, especially in the case of an indigenous language that is spoken by a minority community. First and foremost, one should attempt to describe the language background of the learners, both in acquisition terms and in educational ones. For example: do they speak the target language? Is the target language their L1 or their primary means of communication? If they don't speak the language fluently, do they have access to speakers? Have they heard the language in early childhood? Have they developed the linguistic knowledge of the phonological properties of the language? What about vocabulary, have they acquired the necessary words to allow them to communicate fluently in the language? Is the target language written? Do they use the writing system? In which

contexts? Do they read and write in another language? As discussed in Amaral (2011), the language knowledge and use of the learner is crucial to determine the type of pedagogical approach used.

Any learner model would also bring some basic biographic information about the learners, such as age, place of birth, current address and/or community, years of formal education, etc. It can also present information about the learner's family, especially about their linguistic background.

Because the PGP in Brazil had a well-established audience (middle and high schoolers and their teachers), it was much easier to develop a learner model to the individual projects based on each language. In the case of the Wapichana project, for example, it was determined that the potential users of the material would (i) either be native speakers or second language learners that were able to understand simple stories and everyday scenarios in the language. They would also be able to read and write in Wapichana at an intermediate level. The material would not bring any instructions to help develop early literacy skills related to phonemic awareness or orthographic decoding. Learners were also not required to understand any kind of technical linguistic description, but were rather encouraged to use language to express ideas, desires and describe common situations.

In general, establishing even a simple learner model can be very helpful to determine the learning theories and the pedagogical approaches to be used, which will in turn allow practitioners to propose a more adequate design for their materials. As mentioned before, in the case of pedagogical grammars in indigenous languages, it becomes obvious that many of them are only helpful to users who are comfortable with linguistic jargon and fully speak the language in which the grammar was written (usually Spanish, Portuguese or English), not the indigenous language. This has to be explicitly stated in the learner model.

3.4 Learning theory

Based on the learner model, the context of use and the goals for the material, one can choose the theories that can be more appropriate to facilitate the learning process. A learning theory will discuss ways in which a learner develops their knowledge on a particular subject area in regards to specific pedagogical goals.

Here we have to be very careful to take into consideration the anthropological and socio-educational contexts of the learners, especially in the case of indigenous languages where the educational systems are still being established. Anthropological studies on education can play a central role in reshaping our understanding of learning within indigenous communities (ROCKWELL; GOMES, 2009). We should never forget that learning is a culturally-based construct. Even within societies that share a written tradition, the constructs behind literacy can be very different. For example, while some may focus on the amount and type of content to be memorized, others may prioritize creative uses of the language and critical thinking.

In an ideal world, we would have at our disposal a thorough ethnographic study about how knowledge transmission happens in the target culture, within the target language. These ethnographic studies would also provide information about the status of the written language in the community, and our learning theory would have been experimentally tested. The reality is usually strikingly different. We usually know very little about the intersection between traditional forms of knowledge transmission and current educational practices. Moreover, most indigenous communities in Brazil and Mexico have been exposed to decades of imposition of inefficient educational practices, which in the best-case scenario have produced a total distrust and frustration with the educational system, and in the worst cases, have erased some (or all) successful, traditional practices for knowledge transmission that had been in place for centuries. When this happens, it is common for practitioners to mix up established practices that correspond to appropriate cultural standards with incorporated practices that are the result of recent experiences with foreign entities. As Nascimento and Urquiza (2010) remind us, the curricula developed in indigenous schools have been the product of two distinct perspectives that on one hand emphasize the local culture and on the other prioritize the educational practices that have been identified historically with the school system. In any case, the dialogue to establish the desired educational practices needs to take place, as so does the need to choose and adapt appropriate learning theories for a given context. This will lead to situations where practitioners should not be afraid to present pedagogical tools and innovations that are based on foreign elements to the community. However, one should always respect and observe the choices that are made by the community members involved.

So, how can a learning theory help us and why should we be explicit about the learning theory(ies) we adopt? A learning theory is at the core of the pedagogical choices that guide the preparation of our material. It tells us what to expect when we propose a certain type of pedagogical element (i.e., activities, explanations, presentations, etc.). It is also crucial to justify our design choices, the sequence and type of elements used, and most importantly, it gives us a way to evaluate the appropriateness of the material in light of the intended pedagogical goals. The learning theory is what connects the descriptions presented above (context of use, pedagogical goals and learner model) with the practical choices that will determine the pedagogical approach(es) used in our materials, as described in the next section (3.5). For example, suppose we are talking about learners who have not developed their reading and writing skills. A good learning theory will start by discussing what skills need to be developed. It would then connect them with an explanation of how a specific group of learners could develop them. In the case of literacy, there are many possible theories one could choose (MANDEL MORROW; GAMBRELL; PRESSLEY, 2003). The same is true for other common areas of instruction, such as second and heritage language learning.

As mentioned above, it is important to remember that a learning theory is always culturally bound and one can find numerous works that explore the connections between formal educational systems and culture. From a practitioner's perspective, especially those focused on preparing materials for a course, these connections might seem less relevant at first, but one should never forget that our pedagogical practices do not happen in a vacuum, i.e., they are always part of a more complex context. In any case, there are many theories available that can directly and significantly contribute to the decision-making process when preparing pedagogical materials.

In the case of the PGP in Brazil and Mexico, we focused on certain contemporary theories that provided a guideline for the structure of the grammar books. For example, since we knew that the users would be primarily bilingual speakers with different degrees of proficiency in the target language, we believed the role of contextualized input would be an important feature, such as described by Vanpatten (2007). We also followed Sharwood Smith (1993), and used input enhancement as a facilitative tool when presenting the functional morphology that was targeted by each individual unit. Each unit of the grammar brings a series of

contextualized exercises that go from more to less controlled in order to allow the learner sufficient practice time to be able to test their hypotheses about the usage and form of the grammar topics presented. This choice was heavily influenced by the theories presented by Swain (2005), Ellis (2003) and Long and Robinson (1998), just to name a few.

As we will see in section (3.6), all of these theoretical choices and any learning language theory in itself are highly influenced by our description of the object that is being learned, i.e., our own views of what language is and how it is structured.

3.5 Pedagogical approaches

Once we have some information about the context of use, our pedagogical goals, our target audience and our preferred theories that explain how learning takes place, we are ready to make explicit choices about the design of our material. At this time, it is very useful to have in mind the pedagogical approaches that have been used in the past and their potential contribution to our desired outcome. Pedagogical approaches come in all shapes and forms, and as Richards and Rogers (2001) warn us, they are most useful if we don't take them as infallible expressions of a perfect practice that will lead us to success⁴. If there is one thing that the history of the evolution of methods and approaches to teaching language has taught us is that there is no single answer to how to facilitate learning. Much on the contrary, we are at an age where individualized needs are shaping the future of adaptive learning and unique procedures might be the answer to deal with the infinite number of learning styles that exist.

Here again a word of caution is necessary. The information we have about methods and approaches to teach language come primarily from Western schools of applied linguistics and/or theories of literacy development established for Indo-European languages. Very little is known about how those approaches interact with traditional forms of knowledge in native cultures of Latin America. When faced with such dilemma, many will say that we should then disregard completely

⁴ In fact, after reading about the methods and approaches developed to teach second languages (FOTOS, 2005; RICHARDS; RODGERS, 2001), one might even reach the conclusion that throughout the centuries people have acquired other languages in formal educational contexts despite the methods that were used.

what has been done in the Western tradition and try to recreate (or even emulate) traditional forms of learning. This is obviously a very noble goal, but there is one caveat that is forgotten if we approach the problem with this rationale. Traditional (native and local) mechanisms for knowledge transmission were very successful in passing to future generation the types of knowledge developed by those communities. If the goal of a given pedagogical intervention is to reestablish those types of practices, then this is definitely the way to go. However, in my experience in Brazil and Mexico, when linguists, educators and anthropologists are called by indigenous communities to support their local educational efforts, they are not necessarily asking those *foreigners* to help them do what they already know and do. It would sound preposterous to ask someone from outside the community to reinvent traditional forms of knowledge transmission. Instead, they are usually asking for help in facilitating the incorporation of Western topics and knowledge into their curriculum⁵.

Notice that this does not mean that Western approaches to language teaching can be readily incorporated into the pedagogical materials for indigenous languages. This is not even true in non-indigenous contexts. As Browne and Wada (2010) remind us, the incorporation of the Communicative Approach to teaching English in Japanese schools is not happening without problems, one of them being some cultural elements of the Japanese educational systems that may seem at times incompatible with some methodological underpinnings of the Communicative Approach. One can only imagine that cultural differences would also present some challenges in indigenous educational contexts, and since we cannot speak about a homogeneous education experience for indigenous communities in Latin America, we cannot presuppose that there is one methodological solution that will work in all contexts (there never is in any culture or language).

So how should one proceed in such cases? First, we should remember that this is uncharted territory for all the parties involved, including the speakers

⁵ One of the best examples I have encountered happened during a workshop with Yanomami, Maxakali and Ye'kuana teachers on creating early literacy materials. When asked what they wanted from the materials we were developing together, one Yanomami teacher said very clearly: "we want our children to do what your children can do." He was referring to the development of full literacy that would allow the younger generations of Yanomami speakers to have access to the kind of written materials that old generations have a difficult time dealing with.

of the language who teach it at local schools. So, we should not expect anyone to know from the start what the best pedagogical approaches are. Second, one should never be shy to explore and show people new tools. Some people might feel inclined to withhold information about approaches and practices that are *foreign* to a particular group. I strongly disagree with this attitude, which always seems paternalistic and counterproductive. Everybody is entitled to knowledge and to freely decide what they want to do with it. It is disrespectful towards a group of people to withhold information about elements external to their tradition in the name of a pseudo-preservation of original practices. In the best-case scenarios, there would be an active collaboration among practitioners with different backgrounds.

Ultimately, there is a clear need for ethnographical studies into knowledge transmission that could inform the course of action. There is also a need to explore how different pedagogical approaches could contribute to the specific task at hand, and one would expect that the final product would be the creation of new practices that would be informed by both previous approaches and the cultural/educational traditions of a given people.

In the Pedagogical Grammar project in Brazil, we decided to explore the approaches used in well-established models of pedagogical grammars (KNOP; RYCKER, 2008; NEWBY, 2008; ODLIN, 1994; SWAN, 1992). We then decided to explore potential topics and ways to understand them according to the speakers' feedback. The ultimate result was the development of a methodology that introduces each topic through a variety of culturally relevant scenarios, using scaffolding techniques and dividing the topics into minimal pedagogical units in order to isolate specific uses for each morphological item. All explanations were done in the indigenous languages using a metalanguage appropriate to existing linguistic practices. The grammatical concepts were not translated from a Western tradition. They were rather reanalyzed by the speakers who provided their own interpretations and uses for each language form (OLIVEIRA DA SILVA; AMARAL; MAIA, 2014).

3.6 Language description and theory

This final topic can be divided into two: (i) a description of the language we are working with, and (ii) a language theory. The first one may seem quite obvious.

If we are going to prepare a pedagogical material in a language, we need some information about the language. It could be anything, from structural properties such as its vocabulary, sound system and morphosyntactic structures, to elements of language use, such as communicative contexts, sociolinguistic distinctions, language functions, etc. We need to have at least some (oral or written) texts (or sources for those texts) in a language before we start producing materials in it.

What is sometimes forgotten is that all descriptions are (explicitly or implicitly) based on some sort of language theory. It does not matter if you are describing communicative functions or if you are explaining the sound system of a given language, you are always making choices about how to see the properties you are describing, even if you are not consciously doing so. The problem is that the *learning theories* and the *pedagogical approaches* we choose to work with are heavily dependent on the language theory we are using. Mismatches among them are the number one cause for problems with pedagogical materials, even in non-indigenous contexts. For example, one may find second language textbooks (in many Indo-European languages) that have beautiful descriptions of the communicative approach in their preamble for instructors, but are full of heavily structural activities that focus on verb conjugation or preposition use, very often in very decontextualized exercises. Another example is early literacy materials that claim to be constructivist, but start their sequence of activities with old fashion syllabic exercises. These are instances of clear mismatches between theories of learning, pedagogical approaches and language theory/description. As mentioned before, design decisions about pedagogical materials can be a complex issue, especially when we don't have the necessary language descriptions (whether structural or functional). However, it is important to try to observe coherent models that can provide good examples, independently of your theories of choice.

Moreover, there are two common misconceptions when it comes to this topic that prevent people from either thinking about it explicitly or even start working on their materials all together. The first one is the notion that we need full-fledged descriptions of language forms before we start working on pedagogical materials. This is absolutely not the case. During the PGP, a lot of very interesting language descriptions were developed while creating communicative situations that depended on the use of specific morphosyntactic properties. The second is the idea that choosing to work with functional or communicative theories is easier

than developing more formal descriptions of language properties. The misconception here usually leads to a final product in the indigenous language that looks like an adaptation of pedagogical materials that were developed for other languages/cultures without an appropriate consideration of true communicative or functional analysis of the target language. In many respects, it can be easier to have a basic phonological or morphosyntactic description of a less-studied language, than to have a serious ethnographic study of language use in a given community⁶.

As expected, during the PGP there was a tension created by the initial descriptions of the language forms developed by linguists (for their academic projects), and the pedagogical approach chosen to develop the grammar books. On one hand the existing linguistic work focused on detailed, technical explanations of language forms, while the learning theories were based on pedagogical principles that emphasize the importance of the meaning-form connections in language learning, with a specific focus on the idea that learning is meaning driven, and that language forms can more easily be learned if they are presented in meaningful contexts. In other words, while the linguistic descriptions prioritize explanations that begin with detailed presentations of language forms in order to describe their meanings (form \Rightarrow meaning), the pedagogical approach proposes the opposite direction (meaning \Rightarrow form). In our project, this tension was resolved by taking the pedagogical principles seriously when establishing the procedures to produce the materials. The units in the pedagogical grammars always start with communicative situations, produced by native speakers, that reflected their everyday use of the target language. From those contexts, language teachers developed explanations that are linguistically and culturally appropriate for their students. Each unit ends with a series of exercises that allow students to use language (and the studied language form) to express ideas in different communicative contexts.

Overall it is important to highlight that even in a pedagogical grammar project the choice for a language theory that is more functional, given the learning

⁶ Lack of proper understanding of communicative functions can lead to very strange second language materials. It is at least awkward when we see second language textbooks that start with communicative lessons where people are greeting one another and introducing themselves in an indigenous language when the target language is never used for these functions in their communities because first, no native speaker ever introduces themselves in their language in a community where everybody knows everybody and second many languages don't even have words for *hello* and *good bye*, and we see this fake attempt to replicate such *foreign* situations.

theory and pedagogical principles adopted, was not necessarily incompatible with the formal descriptions of linguistic forms. However, one needs to make clear the priorities set for the work and make conscious decisions about the pedagogical nature of the material to be produced.

4 FINAL REMARKS

The theoretical need for a general framework to think about the preparation of pedagogical materials in indigenous language contexts can be seen if we look more closely at some of the challenges practitioners face when trying to implement a project to create such materials in existing educational scenarios.

The first one is the lack of coherence in certain established pedagogical practices. Visiting local schools that serve indigenous populations in different parts of Brazil and Mexico, one would readily notice that some common practices used in native language instruction are not adequate to their needs. Not only it becomes obvious by the complaints of parents and teachers about the results obtained in schools, but classroom observations frequently show that the pedagogical approaches and materials used are educationally inadequate in relation to local cultural traditions, and/or horribly anachronistic when compared to language teaching practices used nowadays. This scenario usually presents additional hurdles when preparing pedagogical materials to be used in local schools. A framework such as the one presented here can help establish a dialogue among practitioners while searching for the best solutions to their particular situations.

The second contribution of this framework is to highlight the importance of different fields of knowledge in this process, especially when we think about the academic background of the practitioners involved. The six areas that make up the framework connect knowledge traditionally linked to Anthropology (local cultures and context of use), Linguistics (language theory and description) and Education/ Pedagogy (learning theories, pedagogical approaches, learner models). The goal is to encourage practitioners to think about the contributions by these different disciplines and explore mechanisms to incorporate them into their projects.

The main limitation of the ideas presented here is the fact that they are just ideas, i.e., they propose a theoretical frame to think about the complexities of such pedagogical projects, but they don't discuss the practice established during

the work and they have little to say about how to achieve the right level of synergy and collaboration to make such projects work. They also don't say anything about how to obtain the necessary knowledge to answer the multiple questions presented in this paper. Finally, they do not aim at establishing a methodology to prepare pedagogical materials. Each individual project will have to come up with its own action plan and specify the way they propose to build the work.

Overall, practitioners in the field know that preparing pedagogical materials in native Latin American languages can be a daunting task. From the lack of appropriate descriptions of linguistic forms to complicated educational scenarios and little financial support, working with indigenous education can be nothing short of an enormous challenge. This is why the framework presented here should not be taken as a deterrent for such work. I have never encountered a situation where practitioners would have all the necessary tools and information at their disposal before they could start their project. The suggestions presented here should be taken as a general guide to help people explore different ideas and models when preparing materials to be used in educational contexts. Ideally, practitioners should try to build multidisciplinary teams. It is also very helpful for team members to face the challenges as a group, always valuing the contribution of their peers, especially when they come from different areas of expertise with different skill sets or when they bring different personal experiences. On the bright side, working on such projects are unique opportunities for personal learning and intellectual growth for all parties involved.

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