



# Using the Nahuatl Language in Academic Writing

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**Abstract.** This article proposes to foster the use of the Nahuatl language in academic writing, from papers at the undergraduate level to scientific research, by developing the specialized vocabulary needed through the generation of neologisms. It is proposed to implement this development through the parasyntactic method and epistemological equivalence translations, since the (European) languages from which the new concepts are taken belong to an epistemic context different from that of Nahuatl. The current proposal is also replicable for other indigenous languages of Mexico (68 in total with around 360 dialects, according to the National Institute of Indigenous Languages). Likewise, it is believed to be possible to expand the vocabulary of Nahuatl to other fields of knowledge as diverse as physics or theatre, since the method of lexical expansion proposed is in tune with the logic of the language and does not depend on a specific discipline. The absence of Nahuatl in academic writing is due, among other reasons, to the historical obstacles that have impeded the access of the indigenous peoples of Mexico to health, education, and justice systems, since most of the services related to these three areas are offered almost exclusively in Spanish, although some basic documents such as the Political Constitution of Mexico are translated into various native languages. This situation has relegated these languages to mainly colloquial use, thus causing a lack of vocabulary for certain disciplines. A fragment of a case study devoted to the social functioning of the Nahuatl dialectal variety of the town of San Antonio Alpanocan in the state of Puebla, Mexico, is attached as an example of academic writing in Nahuatl. Likewise, the first article of the Political Constitution of the United Mexican States is included as an example of specialized Nahuatl vocabulary use in law.

**Keywords:** Mexico, Nahuatl, academic writing, lexicon production, neologisms, parasyntactic method, thesis, graduate studies, native languages, epistemology, epistemological equivalence translation

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# Использование языка науатль в академическом письме

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**Аннотация.** В данной статье предлагается стимулировать использование языка науатль в академической письменной речи, от студенческих работ до научных исследований, путём развития необходимого специализированного словаря посредством создания неологизмов. Это развитие предлагается реализовать при помощи парасинтетического метода и эпистемологически эквивалентных переводов, поскольку (европейские) языки, из которых берутся новые понятия, принадлежат к эпистемическому контексту, отличному от науатля. Данное предложение применимо и к другим языкам коренных народов Мексики (всего 68 языков с приблизительно 360 диалектами, по данным Национального института статистики и географии). Аналогичным образом, представляется возможным расширить словарный запас науатля и в других областях знаний, от физики до театра, поскольку предлагаемый метод лексического расширения созвучен логике языка и не зависит от конкретной дисциплины. Отсутствие науатля в академических текстах обусловлено, помимо прочего, историческими препятствиями, затруднявшими доступ коренных народов Мексики к системам здравоохранения, образования и правосудия, поскольку большинство услуг, связанных с этими тремя сферами, предоставляется почти исключительно на испанском языке, хотя некоторые основополагающие документы, такие как Политическая конституция Мексики, переведены на различные языки коренных народов. Такое положение дел привело к тому, что эти языки стали использоваться преимущественно в разговорной речи, что обусловило нехватку терминологии для некоторых дисциплин. В качестве примера академического текста на науатле прилагается фрагмент исследования, посвящённого социальному функционированию диалектного варианта науатля в городе Сан Антонио Альпанокан, штат Пуэбла, Мексика. Аналогичным образом, первая статья Политической конституции Мексиканских Соединённых Штатов приводится в качестве примера использования специализированной лексики науатля в области юриспруденции.

**Ключевые слова:** Мексика, науатль, академическое письмо, создание лексики, неологизмы, парасинтетический метод, диссертация, последипломное образование, языки коренных народов, эпистемология, эпистемологическая эквивалентность перевода

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## Introduction

The factors limiting the use of the indigenous languages of Mexico [11] in academic writing and related fields have a structural nature and, from a historical perspective, can be traced back to the occupation of what is now the Mexican territory by the Spanish empire between the 16th and 19th centuries [1]. Throughout the colonial period, thousands of codex books systematically got burned, an example of this being the destruction of the Mayan written heritage by Bishop Diego de Landa, which, according to Cázares [15], happened during an inquisitorial ceremony on July 12, 1562, and was registered by Landa himself, leading to the replacement of the ancient writing systems with the Latin alphabet.

The process of writing substitution went on for at least two centuries, producing hybrid documents or resulting in the coexistence of two writing forms when territorial or legal issues were resolved, among other situations [9]. During this process, writing in native languages stopped, reducing their existence to narrow limits and often leading to their extinction [14]. One of the consequences of these practices over time is scarce scientific writing in indigenous languages at academic institutions in Mexico, which, in its turn, nourishes the cycle of inaccessibility and, as noted by De Sousa Santos [5], the non-recognition of indigenous knowledge.

The purpose of this paper is to add impulse to asserting Nahuatl as a scientific research language through the development of its academic writing lexicon, thus opening possibilities for indigenous communities to participate actively in knowledge production through their mother tongue, which can help new generations to present their academic papers, theses and other scientific texts.

Further, it is demonstrated how academic vocabulary can be generated through the capacity of Nahuatl to express new concepts by means of agglutination and affixation. Several words and their etymologies are given as examples of this capacity, using Nahuatl itself as the main lexical source and avoiding loanwords.

## Theoretical and methodological framework

In this paper, a list of neologisms is proposed, generated, as mentioned above, for the purposes of developing academic writing in Nahuatl and driven through a morphological approach, given that a morpheme is the smallest syntactic unit [6], based on the concepts and phonetics of the Nahuatl language, resulting in the creation of new words equivalent to the Western vocabulary for scientific writing. This is possible thanks to the capacity of the language to fuse words into one integrating the meanings of their elements.

The main procedure suggested for lexicon creation is the so-called parasyntesis, which, according to González [8], encompasses derivation and composition features. In the Nahuatl language this is done by keeping one or several radicals from the words and adding prefixes, infixes and suffixes. The terms considered, as mentioned before, are taken from words for abstract concepts regarding academic and scientific fields. However, this is not a process of literal translation since the Nahua culture belongs to a distant linguistic family and epistemological context in relation to Western languages.

Hence, Nahuatl presents a separate epistemic perspective that implies the adaptation of the borrowed concepts and a different way of thinking about them, provoking a shift towards nourishing a Mesoamerican knowledge production system, along with the necessary lexicon, methodologies and tools that might emerge in the course of its development. In this regard, De Sousa Santos [5] proposes the term “epistemologies from the South” stating that the knowledge of the “global south” is often not recognized by academic institutions, which included the non-recognition of the social struggles experienced by the cultures neglected by the dominant nations. De Sousa mentions that, as long as there is no cognitive recognition, there cannot be social justice for the oppressed groups such as the indigenous peoples.

## Parasynthesis

In order to generate neologisms through parasynthesis, it is necessary to consider the interaction between the Nahuatl features of composition and derivation as elements of the parasynthetic process [9] and to understand basic grammatical constants of the language that can vary among communities in writing, but not phonetically. The alphabet and grammar rules chosen for this study are based on the work of Garibay [7], whose proposition is closer to the Spanish grammar than to English or German, both of which have had a great influence on the alphabets and general literature produced in Nahuatl in the last 50 years. This decision is based on the way Nahuatl has been written across centuries using the Spanish alphabet and certain spelling rules, such as the pronunciation of “ch” or the “q+u” before the “e” and “i” vowels.

In the Nahuatl language, there are several ways of creating lexicon through the union of word roots. To this end, one can classify the most common suffixes, which are the suitable part of the word to be modified. Medina [16] proposes the following classification of these basic suffixes: *-tl*, *-lli*, *-tli*, *-itl*, *-huitl*, *-matl*, *-in*, *-hua*. Certain suffixes are frequently used in specific grammatical elements, for instance *hua* is highly common in verbs but rare in nouns.

These suffixes are either divided or completely substituted when a word is modified. For example, the plural form of the word *comitl* (clay pot), implies that the suffix *-itl* gets divided and fused with the suffix *-me* adding a mute *h*, thus producing the word *comihme* (clay pots). An example of total substitution of a suffix is observed in the word *nantli*, which means “mother”. To generate a quality out of a noun, the suffix *-yotl* is added, producing *nanyotl* (motherhood).

Following this logic, when creating a new concept out of two different words, one of them loses its suffix, depending on the suffix that each one has and on the importance of the word in the sentence and in the new concept, as in the word “bank”, which merges *calli* (house) and *tomil* (money). As the “house” is the building that holds the money and has one of the main suffixes of the Nahuatl language, it has priority in starting the word, resulting in *caltomil*, literally “the money house”.

Still, certain words might contain two concepts with exchangeable positions, for example the word *tlah̄tolnahuatl* standing for “the Nahuatl language”, which is composed of the words *tlah̄tollī* (word) and *Nahuatl*, the name of the language. In this case, depending on the region and on the sentence, one or the other can be placed at the beginning of the word without altering the meaning, since both present one of the eight basic suffixes: *tlah̄tolnahuatl* = *nahuatl̄ah̄tollī*.

Derivation is an abundant source of neologisms in different languages, according to Varo [21], which, in the case of Nahuatl, is a basic way for generating lexicon, reinforcing its considerable flexibility in naming concepts for abstract thinking. From the point of view of composition as part of the parasynthetic process, every word added to the new concept makes it more specific. An example of this is the word “research” in Nahuatl. Derivation is based on the concept of *temohua* (to search), to which the suffix *-liztli* is added, producing the word *temohliztli*, which stands for “the constant action of searching”. By adding the word *matiyotl* (knowledge), the meaning becomes more specific as the roots of both words plus the suffix create *matiliztemohliztli*, translated as “the action of searching for knowledge”. With the help of this method, things that previously were not verbalized in Nahuatl come into existence both as a concept and a written word.

## Specific vocabulary in Nahuatl

Due to the complexity of the interrelations of different factors throughout Mexican history, Nahuatl had to keep and develop specific vocabulary in certain areas of knowledge. These included the administration of lands, and, later, the social struggles during the colonial and postcolonial periods when Mexico needed to define itself along with its institutions. The Nahua lexicon is specifically abundant in such fields as law, botany, agriculture, farming, elementary education and poetry, among others, which enabled the

production of diverse literature in these disciplines. Additionally, publications such as the *Nahuatl Language Dictionary* [19], which even proposes a specific alphabet, help to set standards when generating neologisms despite the lack of unification in the ways to write Nahuatl.

Regarding botany, endemic species are generally still holding their names in native languages, besides their scientific nomenclature in Latin and in Spanish [19]. As for the local species, a common example of loanwords from Nahuatl is the word *tomatl*, in Spanish “tomate”, meaning tomato, but for plants, fruits, trees and other objects that were new to the American continent Nahuatl lacked appropriate vocabulary, often importing such words directly from Spanish.

The following examples mostly refer to the translation of the National Constitution of Mexico [2] into the Nahuatl of the Veracruz state, for which it was necessary to thoroughly develop legal vocabulary (see table 1 and appendix A).

Table 1

Examples of legal lexicon in Nahuatl

Nahuatl	Morphological translation	English
Amatlanahuatilli	<i>Amatl</i> = paper (maiden) <i>-tla-</i> = undetermined feature when used as a prefix or infix <i>Nahuatilli</i> = the law	Constitution
Caltlanahuatiloyan	<i>Calli</i> = house <i>-tla-</i> = undetermined feature when used as a prefix or infix <i>Nahuatilli</i> = the law <i>loyan</i> = locative	State
Nahuatilpiani	<i>Nahuatilli</i> = the law <i>Pia</i> = to have <i>-ni</i> = suffix referring to the person who performs (an action, status, activity)	Just, rightful, equitable
Nahuatilpolohua	<i>Nahuatilli</i> = the law <i>Polohua</i> = to lose	To infringe the law
Nahuatiltecpanani	<i>Nahuatilli</i> = the law <i>Tecpana</i> = to organize <i>-ni</i> = suffix referring to the person who performs (an action, status, activity)	legislator
Nahuatiltzinquixtiliztli	<i>Nahuatilli</i> = the law <i>-tzin</i> = honor (singular) suffix <i>Quixtia</i> = to complete, to reach an ending, to retrieve <i>-liztli</i> = suffix for constant execution	Derogation of a law
Paixaloamatl	“Pasear” = Spanish for “to stroll” <i>Ixtli</i> = Face <i>-tla</i> = Locative <i>Mati</i> = To know <i>Amatl</i> = paper <i>Ixtlamati</i> } <i>Paixaloti</i> To know a place } To travel <i>Paixaloamatl</i>	Passport
Tecococayotl	<i>te-</i> = prefix for indeterminate action (wide range) <i>Cocohua</i> = to have a disease, pain <i>Catqui</i> = to be <i>-yotl</i> = suffix for a noun characteristic	Penalty, a (legal) conviction, condemnation
Tlaciatiamatl	<i>Tlaciati</i> = to be born <i>Amatl</i> = paper	Birth certificate
Tlahtocac	<i>Tlahtohua</i> = to speak <i>Catqui</i> = to be <i>-c</i> = to be at the top of, over the (place)	Governor
Tlahtocayotl	<i>Tlahtohua</i> = To speak <i>Catqui</i> = to be <i>-yotl</i> = suffix for a noun characteristic	Government



As shown above, these words were generated from the Nahuatl language itself without lexical loans. In order to construct them, epistemological equivalence translation was necessary, meaning that the concepts themselves come from the Spanish language, along with its idea of justice related to a particular religious and moral perspective, which might not be shared by the Native American peoples despite the cultural merge that took place.

For instance, the concept of “passport” implies that people in general cannot transit from a country to another without specific legal controls due to the idea of lands belonging to a determined human group. In contrast, from the Nahua epistemic viewpoint, people do not own the land. Rather, the general epistemic idea was that people belong to it [9], which has been partially kept throughout centuries. It does not mean that indigenous communities do not know or practice the idea of private property, but rather that the cultural roots are oriented towards a different way of relating with territoriality.

Given the epistemic differences, it is necessary to avoid confusion regarding the distinct ways of relating with the ideas of mobility and territories. Therefore the word *paixaloamatl* is oriented towards the use of passports in general and is composed of two concepts: *paixaloti*, a Spanish-Nahuatl mix referring to travel, and *amatl*, which stands for “paper”. Etymologically this means “the paper for travelling”, given its function and the material it is mainly made of. In this case the word *paixaloamatl* is descriptive, instead of centring attention on other aspects of the concept in question.

A similar example is the word *tlacatiamatl*, which contains the roots of two words: *tlacati* (to be born) and *amatl* (paper), forming together a “birth certificate”. This example represents the way the names of material objects can be translated, but it is not the same with abstract concepts.

The translation of “law” is not as descriptive as in the previous example, and, from an epistemological equivalence translation perspective, raises the discussion of what “justice” is, along with other legal and philosophical aspects. In Nahuatl, the concept of *nahuatilli* implies that someone “speaks the truth”, respecting others, including nature. Furthermore, not to respect the law is understood as “to lose your true self”. As a consequence, the word *nahuatilpolohua*, which stands for “to infringe the law”, was created from *nahuatilli* (law) and *polohua*, the verb “to lose”.

As shown in table 1, there are concepts that share the same root created through a parasynthetic process as proposed in this paper for academic lexicon development, for example the words *nahuatilli* (law), *nahuatilpolohua* (to infringe the law), *nahuatiltecpanani* (equivalent to “legislator”) and *nahuatiltzinquixtiliztli*, which means “derogation of law”. The word *nahuatilli* has a meaning by itself (law), but, when combined with other words, its suffix gets altered, becoming the root *nahuatil*, which does not carry any meaning alone: *nahuatil-li*, *nahuatil-polohua*, *nahuatil-tecpanani* and *nahuatil-tzinquixtiliztli*. These words are examples of how derivation is used for lexicon expansion in Nahuatl in a specific discipline, whereas the previous words, *paixaloamatl* (passport) and *tlacatiamatl* (birth certificate) are based on composition. As regards the proposed method for the development of vocabulary in the academic field, both composition and derivation will be necessary in the parasynthetic process.

### Generation of academic lexicon

The Nahua culture finds itself in the Mesoamerican zone, which, according to Kirchhoff [12], is a more accurate term than the divisions proposed on the basis of geographic features such as South America, Central America and North America, which generally ignore certain cultural traits.

Following this idea, Kirchhoff highlights that it is not accurate to divide the continent zones as such for the study of indigenous cultures given that several civilizations considered as North American are closer in terms of their cultural and social organization to those in South America than to others from the same region. Therefore it is important to mind cautiously as many cultural aspects as possible when studying Native American populations throughout history.

As mentioned before, in the Nahuatl language the basic suffixes of words are those that often get substituted or modified when two or more concepts get merged through agglutination, affixation or both, meaning that prefixes and suffixes get constantly added, suppressed or modified.

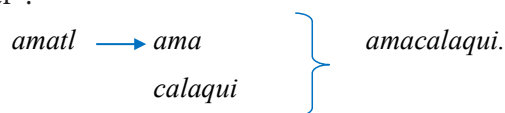
Agglutination is the most common way of developing new vocabulary, as in the word *ej-jecamecatlanonotzaloni* standing for “cell phone”, literally “the act of calling someone through the wind”:

<i>Ej-jecatl</i>	=	wind,
<i>Mecatl</i>	=	connection, rope,
<i>Tlanonotza</i>	=	to call (several times),
<i>Loni</i>	=	action of.

In Nahuatl grammar affixation plays a key role indicating such aspects as the plural form, through adding prefixes and suffixes that can modify certain characteristics of a noun or a verb, as in the case of *cua* (to eat):

<i>Cua</i>	=	to eat (intransitive),
<i>Tlacua</i>	=	to eat (transitive),
<i>Tecua</i>	=	to eat (in a wider range, in general),
<i>Tecuari</i>	=	the great devourer.

It is not common to develop lexicon using compounding because suffixes are modified when forming new words out of two or more components. Compounding is possible when a word having a non-modifiable suffix is added to a word that has a modifiable suffix. For example, the word *amacalaqui* (entrance ticket), contains the phoneme *ama-* which is the root of *amatl* (paper) and *calaqui* meaning “to enter”:



As can be seen, *amatl* is modified losing its suffix in order to unite with *calaqui*, which is not modifiable since it does not have a common suffix.

Given that the Nahuatl language has existed for many centuries [20], words are in general etymologically based on Nahuatl itself. This characteristic complements the parasynthetic process of creating neologisms, which encourages Nahua researchers to apply this method in various disciplines. As long as the new word is coherent with the Nahuatl grammatical and phonetic logic, consensus will take place over time as more academic publications in Nahuatl come out. Every neologism might encounter doubts in the academic community when it is not yet an established concept. Nevertheless, for a Nahuatl speaker it is not complicated to understand the etymology of a new word when seeing it, which facilitates the comprehension of any composed term.

For example, the name of the Tlaxcala state in Spanish is a loan from the Nahua word *Tlaxcallan*. This name is composed etymologically of two lexemes: *tlaxcal*, from the word *tlaxcalli*, which means “tortilla” in Spanish, and *-lan*, a locative, resulting in “the place where tortilla is abundant”. Another example is the word *pilli* (child), which is derived from the verb “to have”, *pia*. Nahuatl can be written in various ways, but phonetics remains highly similar in most of its varieties, this is why pronunciation enables comprehension when reading distinct dialectal writing.

Despite the scarcity of word loans in Nahuatl, it is possible to find some from Spanish or Latin due to the legacy of the colonial period, especially between the 16th and 18th centuries, when religious translations between Latin and Nahuatl were common, and previously existing codex writing merged with Spanish or Latin writing as can be seen in the codex Aubin [17]. There are rare examples of loans even from other languages, such as the word *teotl* referring to God, similar to the Greek lexical element “theo”. As for Spanish-Nahuatl loans, they appeared mainly for administrative or legal purposes as well as for naming animals, concepts or things that were new to the Nahua cultures: *cahuayo*, which means “horse”, is derived from the Spanish “caballo”, where the sound “b”, inexistent in the Nahua phonetics, is substituted with the mute “h”.

In this order of ideas, the following table shows a selection of academic concepts that are considered to be relevant as examples of the epistemological equivalence translation (i.e. not literal but rather equivalent in meaning) through parasynthetic development of neologisms in the Nahuatl language (see table 2).

Table 2

## Examples of academic vocabulary in Nahuatl

Concept in Nahuatl	Morphological translation	Concept in English
Tematiliztemohliztli	Te- = prefix for indeterminate action (wide range) Matiliztli = to know Temohua = to look for -liztli = suffix for constant execution	Academic research
Chihuayotl	Chihua = to do -yotl = suffix for a noun characteristic	Methodology
Matiznequiliztli	Mati = to know -z- = phonetic bridge Nequi = to want “to believe - to think” -liztli = suffix for constant execution	Theory
Temohnequiliztli	Temohua = to look for Nequi = to want -liztli = suffix for constant execution	Objective of research
Cuecuetlacuilolizyotl	Cuecuetzin = small, reduced (reduplication as prefix indicates diminutive) Tlacuilohua = to write -yotl = suffix for a noun characteristic	Abstract

As can be seen above, the vocabulary generated through parasynthesis is not a literal translation but holds to the essence of each concept and presents a different way to express the relevant idea. Appendix B is an example of applying this process to a complete text [10], [22] from which an extract is presented.

The word *matiznequiliztli* is a double formation: the first part of the word is composed of a group of elements forming *matiznequi* and the idea of action is signalled by the suffix *-liztli*. In Nahuatl, “to feel” and “to think” are the same word, *mati*. To generate an equivalent to the concept of “theory”, it is necessary to define its essential meaning first and then proceed with the description of it. A literal translation of *matiznequiliztli* is “the continuity of thinking-believing something”. This double formation illustrates that in many cases it is necessary to form “preliminary” words before reaching the exact concept. Another example of this is the word “paradigm”, understood as a model implying constancy [18], for which exists the word *teixmachotiliztli*, formed by the words *teixmachotia*, “to present an example”, and *-liztli*, the action of something. To reach the intended meaning, the term *teixmachotia* is generated with the help of *teixpantia* (to present), and *machotia*, which stands for “example”.

Another method that can be used for lexicon creation is reduplication, which in Nahuatl mainly carries the idea of repetition or increases the intensity or dimension of what is signified by a word depending on several factors [13], such as the type of the noun being spoken. This characteristic, along with the above- mentioned parasynthetic method, allows concepts to be charged with a deeper meaning, as in *teyecnonotza* (to create a consensus). If split into fragments, four elements can be identified: *te* – *yec* – *no* – *notza*. The prefix *te-* gives the verb indeterminate character signalling an action in the general sense, and *yec* is a lexeme from *yecyotl*, which encompasses the idea of “goodness, tranquillity, good disposition”. The word *notza* is “to name, to call once” someone or something, and when the first syllable is reduplicated, it becomes *nonotza*, meaning “to call repeatedly”, thus enhancing the repetitive action. All together, the word *teyecnonotza* literally means “to call or name several times something with good general disposition”.

### Epistemological implications

Among private and public universities across Mexico, there are certain that are more likely to have in their repositories theses written in Nahuatl. For this reason the current research prioritized those institutions over others. One of them was the national public university, Universidad Autónoma de



México (UNAM) which has been recognized for generating research about indigenous languages and cultures on both a national and an international level.

First, an inquiry was made in the repository of the Mesoamerican Studies Archive<sup>1</sup>, where the answer was that there are no theses written in Nahuatl, despite the considerable number of texts about it as a subject of study. Next, a request for theses in Nahuatl was addressed to the main repository of the UNAM in general<sup>2</sup>, with the same outcome.

Following this, consulted was the IBERO University in Puebla City<sup>3</sup>, which is a private institution that has fostered the humanities as one of its main research fields, but there appeared to be no theses in Nahuatl either. After contacting other universities that were likely to have at least one thesis written in this language, the author found that the results were all the same.

One of the core reasons for this situation is that when a graduate or postgraduate candidate submits his or her thesis for evaluation and approval in Mexico, it is easier to do so in Spanish because most professors produce knowledge in Spanish or other Western languages. Meanwhile, if the thesis is written in Nahuatl, one will have to seek for expert professors in the given field who can read it, which can take several months or even years, due to the scarcity of Nahuatl in the academic field. All this is in spite of the constitutional right to write and speak native languages in Mexico [4], which should oblige institutions to have at least translators for the country's indigenous languages.

This is a common situation with endangered native languages throughout the Americas, where the colonial languages overwhelmed the local ones, relegating them to colloquial use, outside administration, science or any field that requires abstract thinking. According to Camacho [3], these languages are in need of revitalization through the incorporation of new words. He proposes to do this on a massive scale by means of an automated system using English as a source, specifically for the Quechua language in South America. As noted by De Sousa Santos [5], for centuries indigenous knowledge has been neglected on an institutional level as something unworthy of academic recognition. However, this can now be changed in several ways, one of which is language revitalization.

## Conclusion

The development of vocabulary for abstract concepts in academic research could facilitate the inclusion of native communities in the scientific field, which might lead to a change of paradigms, for example, at Mexican universities where it has rarely happened. Generating neologisms for academic and scientific writing in Nahuatl through parasyntesis, avoiding as much as possible loans from other languages, could contribute to the preservation of Nahuatl by expanding its use beyond the domains where it has a constant presence.

This would be a crucial step not only for Nahuatl itself, but also for all the efforts of revitalizing endangered native languages as this would open up the possibilities for integrating into modern academia the indigenous knowledge and perspectives that historically have been neglected.

The academic concepts translated in this paper are borrowed mainly from Spanish and English, but the method proposed here can be applied to any other source language. Furthermore, to start the generation of new lexicon based on other languages seems to be a necessary step towards cognitive emancipation of the Nahua peoples.

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<sup>1</sup> Fragoso, M. "Re: Tesis en Náhuatl" [Theses in Nahuatl]. Personal communication received by the author, 31 May 2025.

<sup>2</sup> UNAM Institutional Repository. "Re: Tesis en Náhuatl" [Theses in Nahuatl]. Personal communication received by the author, 10 June 2025.

<sup>3</sup> Repository Department of the IBERO University in Puebla. Personal interview, 16 July 2025.

## Appendix A

### The Political Constitution of the United Mexican States [2] translated into the Nahuatl of the southern region of Veracruz State

AMATLANAHUATILLI TLAHTOLI  
TLEN MEXICAMEH NECHICOLISMEH  
TLALTLANAHUATILMEH TLEN QUICUALCHIHUA  
TLEN MONEXTI IPAN 5 FEBRERO TLEN 1857

POLITICAL CONSTITUTION  
OF THE UNITED MEXICAN STATES AMENDING  
THAT OF FEBRUARY 5, 1857

#### Achtohui Tocayotl Pamitl Tlen I: Tlamanahuilistli tlen nochi tlacameh

**Tlen se Tlanahuatilhcayotl.** Ipan Mexicameh Nechicolismeh Tlaltlanahuatiloyameh nochi tlacameh quiasicamatiseh tlanamanhuilistli tlen mani ipan inin Amatlanahuatili, nochi yehuan amo huelis molocotzos ihuan mocotonas, san queman nesis tlehueli tlamanthi ihuan tlahtoli ipan Amatlanahuatili.

Moixcotona tlacahuentli ipan Sennechicolistli Mexihco Tlaltlanahuatiloyan. In tlacahuentlimeh tlen hualahuih quiahua ihuan calaqui ipan totlalnanzin quiasicamatiseh, ipampa inon, maquixtilistli ihuan tlanamanhuilistli quen quihthohuah tlanahuatilmeh.

Noihqui moixcotona nochi tlapinahualtilistli tlen hualah ipan tlacamecayotl, tlacayotl noso sihuayotl, xihuicahuitl, axnelcuali tlacayotl, masehualyotl, cocoliscayotl, teotlanetoquilistli, tlahtolyeyecolistli, yolquisalistli, tlanamictilistli, noso seyoc tlamanthi tlen amo quitlepanitas tlacaitalistli tlen quinequis quixcotonas ihuan quixpetlas tlen intechophui ihuan tlamaquixtilistli tlen tlacameh ihuan sihuameh.

#### Title One Chapter I: Of Human Rights and Their Guarantees

**Article 1.** In the United Mexican States, all persons shall enjoy the human rights recognized in this Constitution and in the international treaties to which the Mexican State is a party, as well as the guarantees for their protection, the exercise of which may not be restricted or suspended, except in the cases and under the conditions established by this Constitution.

Slavery is prohibited in the United Mexican States. Slaves from abroad who enter the national territory will obtain, by this fact alone, their freedom and the protection of the laws. Any discrimination based on ethnic or national origin, gender, age, disability, social status, health conditions, religion, opinions, sexual preferences, marital status or any other that violates human dignity and is intended to nullify or impair the rights and freedoms of individuals is prohibited.

## Appendix B

### An example of academic writing in Nahuatl from the author's MA thesis [22]

#### Tlen o mochiachto

Inin tocayotl tlahtohua itech tlen pano ican tlahtolnahuatl ipan altepeme aquihquen tlahtohuan nahuatl, icuac tlahtolnahuatl amo qui pia ij-juiloliztli ihuan queme tlahtolnahuatilli cualli qui palehuia ican nochi huahui tlaname itech altepetl San Antonio Alpanocan.

Ipan to huehuetlacahuapahualiz, tlaquiloliztli ihuan ij-juiloliztli cenca zanceca, tlapaltlaquiloliztli o palehuiaya matiliztli, queme amoxtili Nuttall nozo Zouche-Nuttall ipan tecuacuilli 1, itechten amquin qui mati canin o quin chihuhquen auh queme Hermann (2008) o qui ili o qui tlaquilohquen mixteca tlecanon tlaahuapahualizmixteca amoxtili. In tlapalcatalhtolmatiliztiani Alfonso Caso o qui ili inin achtohui, tleca o quin nenehuili miahquen amoxme itech tlaahuapahualizhuan in nahuac.

#### Problem statement

This section addresses the situation in which the Nahuatl language thrives within the communities where it is still spoken in Mexico, the reasons why the lack of structure in its written version, in certain situations, could be considered as a limitation and in particular how the linguistic variety of the community of San Antonio Alpanocan represents a core element to face the problems that the community affronts.

One of the main characteristics of the graphic representation systems of the native peoples in Mexico is that they did not separate drawing from writing. An example of this is the Nuttall or Zouche-Nuttall codex in Figure 1, whose exact geographical origin is still a matter of debate, although as Hermann (2008) mentions, there is consensus that it belongs to the Mixtec culture, archaeologist Alfonso Caso is the one who postulated for the first time such a cultural origin due to its specific characteristics in contrast to those of other neighbouring cultures, although it shares pictorial features with nearby populations.



Tecuacuilli 1. Amoxltli Zouche-Nuttall (centlahcotontli)<sup>4</sup>

Figure 1. Zouche-Nuttall Codex (fragment)<sup>5</sup>

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### References

1. Amador Tello, J. La arqueología mexicana, una historia de siglos [Mexican archeology, a centuries-long history]. *Revista Proceso*, 5 June 2017, colnal.mx/noticias/la-arqueologia-mexicana-una-historia-de-siglos/ (accessed 28 July 2025).
2. *Amatlanahuatilli Tlahtolli Tlen Mexicameh Nechicoliztli Sentlanahuatilollan* [Political Constitution of the United Mexican States]. Senado de la República, Gobierno de México, 2001, archivos.juridicas.unam.mx/www/bjv/libros/10/4585/4.pdf (accessed 6 August 2025).
3. Camacho, L. Automating the Proposition of Neologisms for the Quechua Language. *Journal of the International Phonetic Association*, 2024, vol. 54, no. 3. P. 922–938. DOI: 10.1017/S0025100324000227.
4. *Constitución Política de los Estados Unidos Mexicanos* [Political Constitution of the United Mexican States]. Cámara de Diputados del Congreso de la Unión, 2025, diputados.gob.mx/LeyesBiblio/pdf/CPEUM.pdf (accessed 17 July 2025).
5. De Sousa Santos, B. Introducción: Epistemologías del Sur [Introduction: Epistemologies from the South]. *Formas-Otras*. Centro de Estudios y Documentación Internacionales de Barcelona, 2011. P. 9–22.
6. Embick, D. *The Morpheme: A Theoretical Introduction*. Boston: De Gruyter Mouton, 2015. 244 p.
7. Garibay Kintana, Á.M. *La Llave del Náhuatl* [The Key to Nahuatl]. Editorial Porrúa, 2007. 385 p.
8. González García, L. La parasíntesis como manifestación de una lingüística del habla [Parasynthesis as a manifestation of linguistic performance]. *Verba: Anuario Galego de Filoloxía*, 2021, vol. 48. P. 1–35.
9. Gruzinski, S. *La Colonización de lo Imaginario: Sociedades Indígenas y Occidentalización en el México Español Siglos XVI–XVIII* [Colonization of the Imaginary: Indigenous Societies and Westernisation in Spanish Mexico, 16th–18th Centuries] (J. Ferreiro trans.). México: Fondo de Cultura Económica, 1993. 311 p.
10. Hermann, M. Códice Nuttall, lado 2. La historia de Tilantongo y Teozacoalco (Introducción) [Codex Nuttall, side 2. The history of Tilantongo and Teozacoalco (Introduction)]. *Arqueología Mexicana*, 2008, special edition, no. 29. P. 8–12.
11. Instituto Nacional de Lenguas Indígenas [National Institute of Indigenous Languages], inali.gob.mx/pdf/CLIN\_completo.pdf (accessed 1 August 2025).
12. Kirchhoff, P. Mesoamérica; sus límites geográficos, composición étnica y caracteres culturales [Mesoamerica; its geographical limits, ethnic composition and cultural traits]. *Tlatoani*, 1967. P. 28–45.
13. Lavrova, N.A., et al. Iconicity as Isomorphism between Cognitive and Linguistic Structures. *Vestnik of Moscow State Linguistic University. Humanities*, 2023, 7 (875). P. 62–70. DOI: 10.52070/2542-2197\_2023\_7\_875\_62.
14. Lenguas indígenas en riesgo de desaparecer [Indigenous languages at risk of disappearing]. Gobierno de México, 2016, gob.mx/inpi/articulos/lenguas-indigenas-en-riesgo-de-desaparecer (accessed 19 July 2025).
15. León Cázares, M. De la persuasión evangélica a la compulsión inquisitorial. Reflexiones historiográficas e históricas sobre la biografía de fray Diego de Landa [From evangelical persuasion to inquisitorial compulsion. Historiographical and historical reflections on the biography of Fray Diego de Landa]. *Estudios de Cultura Maya*, 2022 (autumn – winter), vol. 60. P. 251–289. DOI: 10.19130/iifl.ecm.60.23X00S708.

<sup>4</sup> In tequitl itech Hermann ipan Arqueología Mexicana, qui tlahtohua itech inin amoxltli ipatlen qui pia ome tlacame, Yei-Tecpatl ihuan Macuill-Xochitl, ompa caten miahquen tlamame cemahia Mexica teome. In tlaixcopinalli itech amoxltli Zouche-Nuttall o pix itech Arqueología Mexicana [10], ihuan The Trustees of The British Museum.

<sup>5</sup> Revista de Arqueología Mexicana, 2008, arqueologiamexicana.mx/mexico-antiguo/codice-nuttall (accessed 15 July 2025). Photography: courtesy of The Trustees of The British Museum.

16. Medina Ramos, G.E. *Gramática de la Lengua Náhuatl* [Grammar of the Nahuatl Language]. Consejo Nacional para la Cultura y las Artes, Culturas Populares e Indígenas, 2009. 119 p.
17. Noguez, X. Códice Aubin [Aubin Codex]. *Arqueología Mexicana*, 2009, vol. XVII, no. 99. P. 84–85.
18. Paradigm. *Oxford English Dictionary*, 2025, oed.com/search/dictionary/?scope=Entries&q=paradigm (accessed 7 August 2025).
19. Portugal Carbó, E.C. *Diccionario de la Lengua Náhuatl: Nahuatl-Castilian, Español-Náhuatl* [Nahuatl Language Dictionary: Nahuatl-Castilian, Spanish-Nahuatl]. Editorial Porrúa, 2015.
20. Pueblos nahuas [Nahua peoples], sic.cultura.gob.mx/ficha.php?table=grupo\_etnico&table\_id=76#:~:text=Desde%20el%20 punto%20de%20 vista%20ling%C3%BC%C3%ADstico%2C%20las%20lenguas,antig%C3%BCedad%20es%20aproximada- mente%20de%20 45%20a%2047%20siglos (accessed 1 August 2025).
21. Varo Varo, C. La innovación léxica en español por derivación y composición. Un acercamiento desde la perspectiva del procesamiento lingüístico [Lexical innovation in Spanish by derivation and composition. An approach from the perspective of linguistic processing]. *Mundos del Hispanismo: Una Cartografía para el Siglo XXI* [Worlds of Hispanism: A Cartography for the 21st Century]. Iberoamericana, 2022. Art. 53. DOI: 10.31819/9783968693002\_053.
22. Zúñiga Elizalde, O.A. *Estructuración de un Alfabeto Estandarizable a través del Diseño Estratégico para el Idioma Náhuatl como Forma de Emancipación Cultural ante Problemas Complejos: Variante de la Población de San Antonio Alpanocan* [Structuring a Standardizable Alphabet through Strategic Design for the Nahuatl Language as a Form of Cultural Emancipation Facing Complex Problems: The Variety of San Antonio Alpanocan]. MA thesis. IBERO University Puebla, 2025.

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