

FIRST LANGUAGE ACQUISITION AND LANGUAGE REVITALIZATION IN MAYAN LANGUAGES

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This paper explores the relationship between first language acquisition and language revitalization in Mayan languages, arguing that insights from first language acquisition can significantly enhance language revitalization efforts. It positions language revitalization as a valuable opportunity to support Indigenous activists in their effort to reclaim and revitalize their heritage language while fostering collaborative linguistic research. Drawing from Q'anjob'al child data and the Oxlajuj Aj immersion program for Itza', this paper further argues that new learners of an endangered language should be exposed to the spoken form of the language, adopting a communicative approach rather than a grammar approach. While the pedagogical materials developed for the revitalization of Itza' do not draw directly from Q'anjob'al child data, this child data illustrates how children naturally acquire language through repetition, questions, negation, and error-making. The Oxlajuj Aj immersion program is based on the communicative, physical response, and natural approaches, with emphasis on understanding and producing language in an interactive setting.

1 Introduction

This paper examines the relationship between first language acquisition and language revitalization in two Mayan languages of Guatemala – Q'anjob'al and Itza' – and argues that first language acquisition can significantly inform and enhance language revitalization efforts. The paper also

positions language revitalization as a valuable opportunity to support Indigenous activists in their effort to reclaim their language and to foster collaborative linguistic research.

I draw from Q'anjob'al child data (Mateo Pedro 2015; Pye, Pfeiler & Mateo Pedro 2017), as well as the teaching method (Maxwell 2012; Maxwell et al. 2014) and the pedagogical grammar (Maxwell & Little 2006) of the Oxlajuj Aj immersion program for Itza', to argue that new learners of an endangered language should be exposed to the spoken form of the language, as in first language acquisition. That is, they should follow a communicative approach, rather than a grammar-focused approach. Although the pedagogical grammar developed for the revitalization of Itza' is not based on the Q'anjob'al child data,¹ the child data show how children acquire a language in a naturalistic setting through repetition, questions, negation, making errors, etc. First language acquisition is about the child's exposure to the language and not about describing how the grammar of a language works. Thus, the Q'anjob'al child data discussed in this paper provides insight into what the teaching of a language in language revitalization could look like. That is, learners should be exposed to the language, allowing them to make errors, like a child, and not too much emphasis should be placed on describing the grammar of the language. The Oxlajuj Aj immersion program implemented for the revitalization of Itza' follows the communicative, physical response, and natural approaches. The grammar of the language is not the focus of the learning process.

Pye (2022) emphasizes that, since language documentation is an urgent need due to the pressing risk of language endangerment, children should not be forgotten in language documentation. Furthermore, because the transmission of the language to two-year-old children is the key indicator for language vitality, child language documentation should be included in the work of language documentation for a better understanding of language revitalization. Pye (2022) further emphasizes that when studying child language acquisition, the focus has often been on the child's production, but less attention has been given to the child's interactions with family members. The child's participation in conversation starts early, with the production of sounds and gestures. Therefore, to communicate, the child does not wait until she acquires the adult grammar. If a child starts participating in conversations with a grammar based on sounds and gesture, this raises different questions: What strategies do children use to communicate? How can child language acquisition enhance language revitalization?

The cultural settings for children's exposure to language vary between nuclear-family and extended-family settings. These settings affect the frequency with which caregivers talk directly to children versus to other members of the household. Children acquire language across both kinds of settings (de León 2000, 2017; Pfeiler 2007; Pye, Pfeiler & Mateo Pedro 2017). More studies are needed to understand not only the input children receive from family members, but also children's own participation in conversation (de León & Avelino Sierra 2024). A comparison of child-directed speech and children's speech is shown in Table 1 (Scollon 1976; Pye 2022).

¹The Q'anjob'al child data (www.almaya.org) has been used to develop materials to evaluate children's linguistic competence in Q'anjob'al, such as the *Perfil Lingüístico: Guía de aplicación de la evaluación diagnóstica-Q'anjob'al*. The database also has the potential to contribute to the development of different teaching materials that contribute

Table 1. Turn types in parent-child conversations

Child-directed speech	Children's speech
Imperatives	Spontaneous: Child's own production
Indicatives	Repetition: Child repeats what someone said or repeats themselves
Questions	
Repetition	Elicited imitation: Prompted

This paper is organized as follows. §2 provides some background on Q'anjob'al and Itza', contrasting the vitality of the languages and highlighting some of their common grammatical features. §3 discusses how the Q'anjob'al child data and data from L2 learners of Itza' was collected. §4 provides discussion and examples of parent-and-child conversation in Q'anjob'al. This section also provides discussion of the child's responses to the input and the different forms in her production that helps us to evaluate her types of errors. §5 discusses the revitalization of Itza', focusing on how the project started, the role that Itza' activists have played in the project, the implementation of the teaching method (Maxwell 2012; Maxwell et al. 2014) and the model of pedagogical grammar (Maxwell & Little 2006) used by the Oxlajuj Aj immersion program. This section also includes data from L2 learners of Itza', as well as discussion of how L2 speakers were trained on the teaching method and how the pedagogical grammar of Itza' was created. §6 discusses the contribution of first language acquisition to language revitalization by providing a comparison of the Q'anjob'al child data and data from L2 learners of Itza'. §7 discusses how the model for the revitalization of Itza' is being extended in other Mayan and non-Mayan languages. §8 highlights some examples of linguistic research in language revitalization. §9 provides some recommendations to practitioners in language revitalization and §10 concludes the paper.

2 Background on Q'anjob'al and Itza'

Q'anjob'al is a Mayan language of the Q'anjob'alan branch and spoken in the municipalities of Santa Cruz Barillas, Santa Eulalia, San Pedro Soloma, and San Juan Ixcay, Huehuetenango, Guatemala (Mateo Toledo 2022). Reports of the number of speakers vary (Mateo Toledo 2008), but the 2018 Guatemalan census (Instituto Nacional de Estadística de Guatemala 2018) reports that there are 166,261 speakers. Although there is language shift (England 2003), children are still acquiring the language.

Itza' is a Mayan language of the Yucatecan branch (Lois 1998; Hofling 2017). Different authors have reported that it is spoken in San José, San Andrés, San Benito, and Flores, Petén, Guatemala (Cojtí Macario 1988; Dienhart 1990; Hofling 1991, 1996, 2017; Hofling & Tesucún 2000; Richards 2003; Palosaari 2011), and the number of speakers varies from author to author. The 2018 Guatemala census (Instituto Nacional de Estadística de Guatemala 2018) reports that there are about 2,926 speakers of Itza'. However, as reported through a personal communication with the Comunidad Lingüística Itza' of the Academia de Lenguas Mayas de Guatemala in

to the maintenance of Q'anjob'al.

2021, Itza' is spoken by approximately 37 speakers; 16 native speakers, all around 80 years old, and 21 who are second-language speakers. Itza' is considered an endangered language, since intergenerational transmission stopped in the early 1930s due to various factors (Hofling 1991, 1996; Schumann Gálvez 2000). The elder speakers rarely speak Itza' among themselves, and children are not acquiring the language. There have been previous efforts for the revitalization of Itza', such as the Proyecto del Rescate del Idioma Maya Itza' – PRIMI (Itza' Maya Language Rescue Project), the Biosfera Itza (Itza Biosphere) (Hofling 1996), and the immersion program and language nest implemented by the Academia de Lenguas Mayas de Guatemala (personal communication, Itza' Linguistic Community, 2022).

Itza' and Q'anjob'al share common grammatical features, as discussed below. Both are verb-initial languages but have different word order. Itza' displays either VOS (Verb-Object-Subject) or SVO (Subject-Verb-Object) word orders, while Q'anjob'al is a rigid VSO (Verb-Subject-Object) language (England 1991). For Itza', Hofling & Tesucún (2000: 190,192) report that VOS word order occurs when the object is unmodified and not topicalized (1a), while SVO word order occurs when the subject is finite and topicalized (1b), which is frequent in discourse. An example of rigid VSO word order in Q'anjob'al is provided in (2). As (1–(2) show, both languages use a rich system of prefixes and suffixes to convey tense/aspect, mood, and other grammatical categories.

- (1) a. K-u-kin-s-ik b'alum a' winik-ej.
 INC-ERG3SG-die-CAUS-ITS jaguar DET man-TOP
 'The man kills jaguar(s).' (Hofling & Tesucún 2000: 190)² Itza', VOS
- b. A' b'alum-ej k-uy-il-ik winik.
 DET jaguar-TOP INC-ERG3SG-ITS man
 'The jaguar sees (a) man.' (Hofling & Tesucún 2000: 191) Itza', SVO
- (2) Max-ø s-kol ix Xhuxhep naq Lwin.
 COM-ABS3SG ERG3SG-help CLF Josefa CLF Pedro
 'Josefa helped Pedro.' (England 1991: 456) Q'anjob'al, VSO

Itza' and Q'anjob'al exhibit a split ergative system with both ergative-absolutive and nominative-accusative alignments. In the ergative-absolutive alignment, the subject of an intransitive verb and the object of a transitive verb are marked by an absolutive morpheme, while the subject of a transitive verb is marked by an ergative morpheme. In the nominative-accusative alignment, the subject of an intransitive and a transitive verb is marked with the ergative morpheme, while

²Itza' and Q'anjob'al examples are given in the languages' orthographies. Abbreviations use the Leipzig Glossing Rules (Max Planck Institute for Evolutionary Anthropology 2015) and the following additional abbreviations: ABST: abstract noun; ASP: aspect; CIS: completive intransitive status; CTS: completive transitive status; DEP: syntactic dependency; DER: derivation; DIR: directional; DTV: status suffix for derived transitive verb; DUB: dubitative; EMPH: emphasis; EXIST: existential; INC: incompletive aspect; IRR: irrealis; ITS: incompletive transitive status; IV: status suffix for intransitive verb; NCL: numeral classifier; PREP: preposition; PRO: pronoun; QUANT: quantifier; RIV: status suffix for root intransitive verbs; RTV: status suffix for root transitive verbs; SUF: suffix. Parentheses () in the Q'anjob'al child data indicate that the child's production is not clear.

the object of a transitive verb is marked with an absolutive morpheme. In Itza', the ergative-absolutive alignment is found in the completive aspect (3), while the nominative-accusative alignment is found in the incomplete aspect (4; both examples are from Hofling & Tesucún 2000: 357).

- (3) a. T-inw-il-aj-ech.
COM-ERG1SG-see-CTS-ABS2SG
'I saw you.' Itza', transitive
- b. Em-ø-eech.
descend-CIS-ABS2SG
'You descended.' Itza', intransitive
- (4) a. K-inw-il-ik-ech.
INC-ERG1SG-see-ITS-ABS2SG
'I see you.' Itza', transitive
- b. K-inw-em-el.
INC-ERG1SG-descend-IIS
'I descend.' Itza', intransitive

In Q'anjob'al, the ergative-absolutive alignment is found in the incomplete, completive, and potential aspects, as in (5), while the nominative-accusative alignment is found in the progressive aspect (6).

- (5) a. Max-ach w-il-a'.
COM-ABS2SG ERG1SG-see-RTV
'I saw you.'³ Q'anjob'al, transitive
- b. Max-ach el-i.
COM-ABS2SG descend-RIV
'You descended.' Q'anjob'al, intransitive
- (6) a. Lanan hach w-il-on-i.
PROG ABS2SG ERG1SG-see-DEP-IV
'I am seeing you.' Q'anjob'al, transitive
- b. Lanan ha-way-i.
PROG ERG2SG-sleep-RIV
'You are sleeping.' Q'anjob'al, intransitive

In Itza', many nouns take the feminine, *ix*, or the masculine, *aj*, noun classifier (7). Q'anjob'al uses fifteen nominal classifiers (Raymundo González et al. 2000); the classifiers *no'* and *ix* are illustrated in (8).

³Q'anjob'al examples without parenthetical citations come from my L1 knowledge.

- (7) a. Ya tan-u-k'ay aj-kax.
 already DUR-ERG3SG-sing CLF-chicken
 '(The) roosters were already crowing.' (Hofling & Tesucún 2000: 207) Itza'
- b. A'-loj u-meyaj ix-ch'up.
 DET-DIST ERG3SG-work CLF-woman
 'That is women's work.' (Hofling & Tesucún 2000: 207) Itza'
- (8) a. Lanán-xa y-oq' no' mam kaxhlan.
 PROG-ADV ERG3SG-cry CLF father chicken
 '(The) roosters were already crowing.' Q'anjob'al
- b. Juntzan tu s-mulnaj-il heb' ix ix.
 those DEM ERG3SG-work-ABST PL CLF woman
 'That is women's work.' Q'anjob'al

Numeral classifiers are also found in these languages. In Itza', numeral classifiers distinguish animate (9a, b) vs. inanimate (9c, d) nouns (Schumann Gálvez 2000: 85-87). In Q'anjob'al, numeral classifiers distinguish animals (10a), people (10b), and objects (10c, d).

- (9) a. jun-tuul pek'
 one-NCL dog
 'a dog' Itza', animate
- b. ka'-tuul winik
 two-NCL man
 'two men' Itza', animate
- c. ka'-p'eel witz
 two-NCL hill
 'two hills' Itza', inanimate
- d. ox-p'eel kaj
 three-NCL town
 'three towns' Itza', inanimate
- (10) a. ka-k'on tx'i'
 two-NCL dog
 'two dogs' Q'anjob'al, animal
- b. ka-wan winaq
 two-NCL man
 'two men' Q'anjob'al, person
- c. ka-b' witz
 two-NCL hill
 'two hills' Q'anjob'al, inanimate

d. ox-eb' konob'
 three-NCL town
 'three towns'

Q'anjob'al, inanimate

3 Q'anjob'al child data and data from Itza' L2 learners

The Q'anjob'al child data come from a longitudinal study of the acquisition of Mayan languages, which includes Ch'ol, Mam, and Q'anjob'al (Mateo Pedro 2015; Pye, Pfeiler & Mateo Pedro 2017).⁴ In this paper, I analyze only one session from a Q'anjob'al child (Xhuw, 1;11) from Santa Eulalia, Huehuetenango, Guatemala. The child was visited every 15 days for approximately a year; the length of each session was about one hour. The data come from spontaneous conversations between the child and her parents, cousin, and/or visitors. Every session was audio- and video-recorded using two digital audio recorders (Edirol-R1 and Olympus) and a Panasonic PV-GS150 video camera paired with a Sony microphone. The audio tracks were captured in 16-bit WAV format, while the videos were initially recorded in mini-DV format and subsequently converted to MPEG format using Adobe Premiere Elements. All audio and video files were digitized for transcription purposes. Most transcriptions were done with the MPEG video files, as their high sound quality and visual content facilitated precise transcriptions (Mateo Pedro 2010). We used the SoundScriber program for transcription, adhering to the Q'anjob'al alphabet established by the Academia de las Lenguas Mayas de Guatemala (Acuerdo Gubernativo 1046-87).

Xhuw was the family's first child when the recordings began. She lived with her parents, who are fluent in Spanish. In the recordings, Xhuw interacted the most with her father, and had limited interactions with her mother and cousin. Although Xhuw was primarily exposed to Q'anjob'al, she occasionally used a few Spanish words due to children's television programs or her parents switching between Q'anjob'al and Spanish (Mateo Pedro 2010, 2015). Before data collection, the child's parents signed a consent form. Each family received a symbolic payment for their child participation in the language acquisition project. One strategy that we followed in the project was that if the child did not feel comfortable in the first three sessions, the child was withdrawn from the project.

The Itza' data come from a short and spontaneous conversation from two L2 learners, who have been participating in the immersion program for the revitalization of Itza' (Mateo Pedro *in press*).⁵ The project includes students from San José, San Andrés, and surrounding communities of Petén, Guatemala. The project began with 53 participants: 48 adults aged 21 to 55 and five children aged 7, 9, 11, and 12. During the first year, eight hours of teaching and learning were provided per week, two hours each day. In the second year we made some changes; instead of four days of classes, we decided to have only two days to give the instructors more time to prepare teaching material, especially the audio recordings of the pedagogical grammar of Itza'.

⁴See www.almaya.org for more on the study.

⁵I have been involved in the revitalization of Itza' for more than three years, and I have permission from the community to talk about the project and use the data of L2 learners of Itza'.

Before the recording, we explained the purpose of the project to the participants, and they signed a consent form.

4 Parent-child conversation in Q'anjob'al

Pye (2022) argues that children perform like native speakers of the language that they are acquiring. Following Pye's idea, I show that the Q'anjob'al child follows the same strategies as adult speakers. An example of the child's conversation with her father is shown in (11–12). In (11), the father starts the conversation by asking what the child is doing. The child responds to the question by mentioning a baby girl (doll) who is sleeping. In (12), the child initiates the conversation and tries to turn off the audio recorder, while her father is talking to a visitor. Notice that the child produces her own forms, which are not just repetitions of the adult form. The Q'anjob'al child data follow the following format: the first line shows the child's production; the second line shows an equivalent target form in the adult grammar of Q'anjob'al, introduced by an equal sign; the third line provides the morphological gloss; and the fourth line provides the English translation (Mateo Pedro 2015, 2024). I follow the same format when presenting data from L2 learners of Itza'.

(11) Parent initiating conversation

- a. Father: *tzet lanan h-on-en-i*.
Q PROG ERG2SG-do-DEP-IV
'What are you doing?'
- b. Child: *han nenah*
=jun nena
one baby
'A baby girl.'
- c. Father: *jay?*
Q
'Really?'
- d. Child: *on nenah*.
=jun nena
one baby
'A baby girl.'
- e. Father: *jun nena*.
one baby
'A baby girl.'

- f. Child: ul la way.
 =jun la ch-ø-way-i
 one DEM INC-ABS3SG-sleep-IV
 ‘This one is sleeping.’

(12) Child initiating conversation

- a. Child: axhe’.
 =k’am chi-ø je’
 NEG INC-ABS3SG can
 ‘It is not possible.’
- b. Father: taynej-eq he-b’a.
 care.for-PL ERG2PL-REFL
 ‘Take care.’
- c. Visitor: hin-ye-mi xin.
 ERG1SG-yes-DUB ADV
 ‘Okay then.’
- d. Child: putu’.
 =chi-ø hin-b’ut-u’
 INC-ABS3SG ERG1SG-turn.off-RTV
 ‘I turn it off.’
- e. Father: hinye.
 okay
 ‘Okay.’
- f. Visitor: tay nen.
 goodbye baby
 ‘Goodbye baby.’
- g. Father: hinye.
 okay
 ‘Okay.’
- h. Father: no m-ij.
 NEG 1SGPOSS-daughter
 ‘No daughter.’
- i. Child: hinputu’.
 =chi-ø hin-b’ut-u’
 INC-ABS3SG ERG1SG-turn.off-RTV
 ‘I turn it off.’

- j. Father: hinye ka-chi b'ay ix.
 okay ABS2SG-say PREP PRO
 'Say goodbye to her.'
- k. Child: ah?
 =tzet yetal
 what thing
 'What is it?'
- l. Visitor: toy-in.
 go-ABS1SG
 'I am leaving.'
- m. Child: teh.
 =hinye
 okay
 'Okay.'

The examples in (13) illustrate the child's spontaneous production and how her father uses repetition to make sure that he is following the conversation. When introducing new topics, the father starts asking questions, as in (14).

(13) Child's spontaneous production

- a. Child: ixh chachateee.
 ()
 ()
- b. Father: n?
 what
 'What?'
- c. Child: ay talo.
 =ay ch'en karro
 EXIST CLF car
 'There is a car.'
- d. Father: ha-karro
 ERG2SG-car
 'Your car.'

e. Child: ja’.

=ja’

yes

‘Yes.’

f. Father: ha-karro.

ERG2SG-car

‘Your car.’

g. Child: ja’ teneto.

=ja’ ()

yes ()

‘Yes ().’

h. Father: n?

what?

‘What?’

i. Child: jota la.

=jun-xa la

one-ADV DEM

‘Another one.’

(14) Father prompting conversation

a. Father: b’aytal ay ha-tumin?

where EXIST ERG2SG-money

‘Where is your money?’

b. Child: ah?

=tzet yetal

what thing

‘What is it?’

c. Father: b’ay x-ø-ø-a’ kan-oq?

PREP COM-ABS3SG-ERG2SG-give DIR-SUF

‘Where did you leave it?’

d. Child: tam.

=k’am

NEG

‘There is nothing.’

e. Father: k’am.

NEG

‘There is nothing.’

- f. Child: ju tumin.
 =jun tumin
 one money
 ‘Money.’

Table 2 shows the types of utterances produced in the parents’ speech in Q’anjob’al during this one session. The table shows that there is a difference between the child’s production and her parents’. The father’s high number of productions in this parent-child interaction is due to two main factors: he oversaw the recording of the child, and he was responsible for taking care of the child. Both parents show differences in their child-directed speech. While the mother used more imperatives than indicatives, the father used more indicatives than imperatives. Both parents produced more negative indicatives than negative imperatives. There was more negation in the mother’s forms and more questions in the father’s. Both parents repeated some of the child’s forms. The child’s cousin produced different forms, such as indicatives, negations, questions, and repetitions.

Table 2. Types of utterances in child-directed speech in Q’anjob’al

Function	Type	Father		Mother		Cousin	
		Count	%	Count	%	Count	%
Control	Imperative	95	8.52	100	24.57	2	4
	Indicative	386	34.62	39	9.58	9	19
	Negative indicative	128	11.48	31	7.62	0	0
	Negative imperative	31	2.78	7	1.72	0	0
	Negation	2	0.18	76	18.67	9	19
	Question	129	11.57	19	4.67	10	21
Response	Answer	10	0.90	0	0	0	0
	Repetition	181	16.23	128	31.45	10	21
Breaking off	Exclamation	126	11.30	5	1.23	3	6
	Unclear	27	2.42	2	0.49	5	10
Total		1115	100	407	100	48	100

Table 2 also shows that the child is exposed to different imperative forms, such as intransitive, transitive, positive, and negative imperatives. (15) illustrates intransitive and transitive imperatives. (15a) illustrates an intransitive imperative, which is marked by the suffix *-an*.⁶ (15b) illustrates an intransitive imperative that takes the directional *-teq*. (15c) illustrates a transitive imperative, marked by the suffix *-V*.⁷ In other cases, in addition to the imperative, the expression *kachi* ‘say it’ is used, as illustrated in (15d).

⁶This was an imperative from the father to the child after finishing the recording of this session.

⁷The suffix *-V* is attached to underived transitive verbs, while the suffix *-j* is attached to derived transitive verbs (Mateo Pedro 2015).

(15) Imperatives

- a. Father: way-an. xin.
sleep-IMP ADV
'Sleep then!'
- b. Father: el-an-teq. b'ay tu.
exit-IMP-DIR PREP DEM
'Get out from there!'
- c. Father: jaq-a'.
open-IMP
'Open it!'
- d. Father: ax jun ti wakax ka-chi.
this one DEM COW ABS2SG-say
'This one is a cow, you say.'

Positive and negative imperatives also differ. (16a) illustrates a positive intransitive imperative, marked by the suffix *-an*, while (16b) illustrates a negative intransitive imperative, marked by the clitic *ta*. (17a) shows an indicative transitive imperative, marked by the suffix *-V'*, while (17b) shows a negative transitive imperative marked by the clitic *ta*. The negative intransitive imperative in (17b) does not take the imperative suffix *-an*, but takes an absolutive person marker. A similar process is seen in the negative transitive imperative in (17b), which does not take the imperative suffix *-V'* but takes an ergative person marker.

(16) Positive and negative intransitive imperatives

- a. Father: way-an bebe ka-chi b'ay.
sleep-IMP baby ABS2SG-say PREP
"Sleep baby!" tell the baby.'
- b. Father: hach el ta.
ABS2SG fall NEG.IMP
'Do not fall.'

(17) Positive and negative transitive imperatives

- a. Father: jaq-a'.
open-IMP
'Open it.'
- b. Mother: ha-b'ut ta.
ERG2SG-turn.off NEG.IMP
'Do not turn it off.'

Negation in general differs from the negative imperative. It varies depending on the lexical type being negated – e.g., noun vs. verb – and, for verbs, on tense/aspect (Mateo Pedro 2010;

Pye, Pfeiler & Mateo Pedro 2017). For example, in (18a) *k'am* negates a verb in incomplete aspect; in (18b), *maj* negates an irrealis; and in (18c), *k'amaq* negates the whole sentence.

(18) Negation

- a. Father: *k'am ch-ø-a-maqche-j*.
NEG INC-ABS3SG-ERG2SG-close-DTV
'Do not close it.'
- b. Father: *maj ta'-w-oq*.
NEG answer-DER-IRR
'She did not answer.'
- c. Father: *k'amaq, nena, k'am ch-ø-a-maqche-j*.
NEG baby NEG INC-ABS3SG-ERG2SG-close-DTV
'No, baby. Do not close it.'

There are also different forms of questions. In (19a, b), *tzet* is used to question a verb and adjective; in (19c), *b'aytal* is used to question a locative; and in (19d), the quantifier *jay-* takes the numeral classifier *-eb'* to specifically question an object.

(19) Questions

- a. Mother: *tze ch-ø-ø-one-j*.
what INC-ABS3SG-ERG2SG-do-DTV
'What are you doing?'
- b. Father: *tzet yili ch'en carro tu?*
what color CLF car DEM
'What color is that car?'
- c. Father: *b'aytal ay jun-xa tu?*
where EXIST one-ADV DEM
'Where is the other?'
- d. Father: *jay-eb' ha-tumin?*
QUANT-NCL ERG2SG-money
'How much money do you have?'

Table 3 provides the child's spontaneous responses to her parents' questions and her own production, e.g., spontaneous productions, negation, and questions.

Table 3 shows that, although Xhuw shows many variations – for example, sound substitutions, such as *tam* for *k'am* in (14d) – these errors do not prevent her from communicating with others. Below, I provide further examples of the child's responses to her parents. In (20b), she produces an imperative directed to her baby doll, as a response to her father's prompt in (20a). Xhuw used her own word for 'baby,' *chik*, that differed from her father's words, *bebe* and *nene*.

Table 3. Child's own speech in Q'anjob'al

Function	Type	Count	%
Control	Spontaneous	17	3
	Negation	86	13
	Question	7	1
Response	Answer	325	51
	Repetition	4	1
Breaking off	Exclamation	149	23
	Unclear	1	0
	Silence	49	8
Total		638	100

(20) Child's imperatives

- a. Father: way-an bebe ka-chi b'ay.
 sleep-IMP baby ABS2SG-say PREP
 'Sleep baby! tell the baby.'
- b. Child: way-n chik chu'.
 =way-an chik ()
 sleep-IMP baby ()
 'Sleep baby ().'
- c. Father: ja' toj y-i ixh nene' jun-ok chichi' ka-chi b'ay.
 yes go ERG3SG-bring CLF baby one-SUF meat ABS2SG-say PREP
 'Yes, the baby goes to get meat, you tell her.'

In (21), the child tries to convince her father to leave (21a, c) and turn off the recorder (21e).

(21) Child making requests to her father

- a. Child: hato koj.
 =a kotoji.
 EMPH ERG1PL-go-IV
 'We are leaving.'
- b. Father: n?
 Q
 'What?'
- c. Child: toto koj.
 =a ko-toj-i.
 EMPH ERG1PL-go-IV
 'We are leaving.'

d. Father: m?

Q
'What?'

e. Child: apuchu'.

=chi-Ø ha-b'ut-u'.
INC-ABS3SG ERG2SG-turn.off-TV
'You turn it off.'

f. Father: hinb'utu'.

=chi-Ø hin-b'ut-u'.
INC-ABS3SG ERG1SG-turn.off-TV
'I turn it off.'

(22c) shows the child's response to her father's production of the existential *ay* in indicative and negative contexts.

(22) Child's production of existential

a. Father: la k'am-xa.

DEM NEG-ADV
'Look, there is nothing anymore.'

b. Father: la ay-xa.

DEM EXIST-ADV
'Look, there is something now.'

c. Child: a xhon.

=ay son
EXIST marimba
'There is marimba.'

d. Father: n ay son.

yes EXIST marimba
'Yes, there is marimba.'

The examples in (23) show the child's responses to her father's questions. The child's responses are simple and natural, showing her own way of producing sounds and words of Q'anjob'al, such as the word *tx'i* 'dog,' which she produces as *chi* (23c).

(23) Child's spontaneous responses

a. Father: ax jun la?

here one DEM
'Look, here is one.'

- b. Father: tzetal?
Q
'What is it?'
- c. Child: ntchi'.
=jun tx'i'i.
one dog
'A dog.'
- d. Child: un tih.
=jun ti
one DEM
'This one.'
- e. Father: ax jun ti la.
here one DEM DEM
'And this one?'
- f. Child: mexh.
=mis
cat
'It is a cat.'

5 Revitalization of Itza'

Researchers and institutions have come to the Itza' region offering high expectations for the revitalization of the language (e.g., Hofling 1996). The current project on the revitalization of Itza' provides concrete strategies to effectively revitalize Itza' and it is a unique opportunity for the community. The project was identified as an urgent need in several online meetings with Juan Miguel González Toledo, former president of the Academia de las Lenguas Mayas de Guatemala, and the late Herbert Marcony Chayax, president of the Itza' Linguistic Community. Community activists state that the current project is not only awakening the Itza' language but also awakening Indigenous activists to organize themselves and take actions to promote the use of the language. In less than two years, the project has made remarkable accomplishments, as illustrated by the two quotes below from two Indigenous activists on the revitalization of Itza'.⁸

"Since 1993, when the Comunidad Lingüística Itza' was founded, and until now, the teaching of the language has focused on reading and writing. There is no proposal for the revitalization of Itza'. The current project is a golden opportunity for the community; it brings a teaching method and a grammar, including the training of L2 speakers of the language" (Otoniel Rosendo, July 2023).

⁸I have translated both quotes from Spanish to English.

“It is not the same when you attend a conference where you are told what to do as when you are walked through the different processes for language revitalization.” (José Alfredo, July 2023).

Although, as noted previously, the materials for the revitalization of Itza’ are not based on the Q’anjob’al child data, the child data shows how children acquire a language in naturalistic setting by negotiating with their conversational partners through repetition, asking questions, negating, and making errors. This shows that the child is actively using her limited language skills to accomplish her own goals, rather than passively listening to an instructor. Thus, the child data presented in this paper provides insights into what exposure to a language in a conversational context would look like. That is, the learners should have more exposure to the language. Based on the Q’anjob’al child data, instructors should allow learners to make errors – as the child does – rather than correcting their pronunciation and grammar.

The Oxlajuj Aj immersion program, implemented for the revitalization of Itza’, follows the communicative, physical response, and natural approaches, which means understanding and producing the language, with less focus on the grammar.

The project focuses on language revitalization and not on cultural revitalization, given that the Comunidad Lingüística Itza’ has been promoting cultural revitalization for many years. To accomplish the goal of learning to speak and understand Itza’, in the project we implemented the teaching method described in Maxwell (2012) and Maxwell et al. (2014), as well as the pedagogical grammar by Maxwell & Little (2006) used in the Oxlajuj Aj immersion program. This program has been used to teach Mayan languages to people who do not speak any Mayan language, e.g., international students and local students from Guatemala, for around 35 years.

Some of the steps of the teaching method that have been used in the Itza’ project are described below. First, students are required to study the learning material at home before coming to the classroom. Second, instructors demonstrate the materials that students studied at home. In this step, instructors place emphasis on the students’ listening and observation of what is happening in the demonstration. Third, instructors evaluate students’ comprehension by asking them yes/no questions or requesting them to touch and/or point at objects found in the classroom, which are related to the lesson covered. Fourth, students are encouraged to produce their own forms based on the demonstration and the comprehension exercises. Fifth, students and instructors engage in a discussion of the grammar of the language and related aspects of culture. Students can take notes in this step, but not in the other steps, given that the main goal is to encourage students to understand and speak the language.

5.1 Pedagogical grammar of Itza’

The pedagogical grammar is built mainly around conversational topics. Each topic includes a vocabulary in Itza’ and Spanish, conversation in Itza’, exercises in Itza’, readings in Itza’, and a grammar discussion in Spanish. Table 4 and (24–25) illustrate the connection between the

vocabulary, conversations, and exercises for learning greetings. These examples are taken from the Itza' pedagogical grammar (Mateo Pedro et al. 2024: 2-3).⁹

Table 4. Vocabulary for greetings in Itza'

Itza'	English
Te' yoos.	Good morning.
¿B'ix ab'el?	How are you?
¿Yaneech ma'lo'?	Are you okay?
Ma'lo' b'o'tik.	Good, thank you.
Ma'lo'.	Good.
Jach ma'lo'.	Very good.
B'aylo'.	So-so.
Yoos b'o'tik.	Thank you.
Tak samal.	Until tomorrow.
Kiwilik kib'aj.	See you soon.

(24) Greeting dialogue in Itza'

- a. Aj Sastun: Te' yoos.
- b. Aj Mo': Te' yoos.
- c. Aj Sastun: ¿B'ix ab'el?
- d. Aj Mo': Ma'lo', yoos b'o'tik. ¿B'ix ab'el?
- e. Aj Sastun: Ma'lo', yoos b'o'tik.
- f. Aj Mo': B'o'tik, ka' ma'lo'. Tak samal.
- g. Aj Sastun: Tak samal.

(25) Greeting exercises in Itza'

- a. *Kasak'untik ti oxtuul makoo'*. 'Greet three people.'
- b. *Katz'iib'tik oxp'eel sak'unoo'*. 'Write three greetings.'
- c. *Kameyajtik etel juntuuł ajka'ansaj ti*. 'Pronunciation practice.'

Another conversational topic is about towns, as shown in Table 5 and (26–27) (Mateo Pedro et al. 2024: 10-11).

⁹The current version of the pedagogical grammar is available at https://pedromateo.ca/wp-content/uploads/2024/05/gramatica_pedagogia_itza_v06_color-1869213915-e1716480226623.pdf.

Table 5. Vocabulary related to towns in Itza'

Itza'	English
kaj, nojkaj, tzukub'	town, city
tu'ux?	where?
jajil	true, really
Nojkaj ti Paxil	Guatemala City
Ix Tutz	San José
Chäk'an Itza'	San Andrés
Noj P'eet	Flores
kaj	town
inkaj	my town
akaj	your town
ukaj	her/his town
kikaj	our town
akaje'ex	your (plural) town
ukajoo'	their town
¿B'ix uk'ab'a' akajal?	What is the name of your town?
¿Tu'ux yanech?	Where are you?
Yanen ti Chächäk lu'um'.	I am in San Francisco.
¿B'ix uk'ab'a' ukajal ti la'ayti'oo'?	What is the name of their town?
A' kajalej uk'ab'a' ti la'ayti'oo' Ix Tutz.	Their town's name is San José.

(26) Dialogue about towns in Itza'

- a. Aj Sastun: Te' yoos.
- b. Aj Mo': Te' yoos.
- c. Aj Sastun: ¿B'ix ab'el?
- d. Aj Mo': Ma'lo'en. ¿Intech b'ix ab'el?
- e. Aj Sastun: Ki' inwool.
- f. Aj Mo': Jach ma'lo'.
- g. Aj Sastun: ¿B'ix ak'ab'a'?
- h. Aj Mo': Ink'a'b'a' Aj Mo'. ¿Intech b'ix ak'ab'a'?
- i. Aj Sastun: Ink'ab'a' Aj Sastun. ¿B'ix uk'ab'a' ak Ajal?
- j. Aj Mo': Inkajal uk'ab'a' Chäk'an Itza'. A' kajalej ak'ab'a' Noj P'eet. ¿Jajil?
- k. Aj Sastun: Ma'. Inkajal uk'ab'a' Job'onpich. Job'onpich uk'ab'a' akajal.

(27) Exercises about towns

- a. ¿B'ix uk'ab'a' ukajal Aj Sastun? 'What is the name of Sastun's town?'
- b. K'atej ti ka'tuul makoo' b'ix uk'ab'a' ukajal. 'Ask two people the name of their town.'

5.2 Training on teaching methods and pedagogical grammar

Hofling (1996) states that for a revitalization project to be successful, it must include training of human resources on language revitalization, development of teaching materials for language learning, and creation of language teaching centers. In this section I discuss training for L2 speakers of Itza' on the teaching method, as well as development of the pedagogical grammar following the Oxlajuj Aj immersion program (Mateo Pedro in press). This training was conducted in collaboration with the Itza' Linguistic Community in the municipality of San José, Petén. The training was carried out with the support of Elsa Sucely Sacalshot López and Mario Marroquín Peliz, two native speakers of K'iche' who are experienced using the teaching method and have developed their own pedagogical grammar of K'iche'. Personnel from the Itza' Linguistic Community were also trained in developing the pedagogical grammar of Itza', using the Tijonik Kaqchikel Oxlajuj Aj/Kaqchikel Mayan Language and Culture Course (Maxwell & Little 2006) as a model. This process involved collaboration between personnel of the Itza' Linguistic Community and linguistics students from the University of Toronto. Personnel of the Itza' Linguistic Community contributed to the development of the vocabulary, conversations, and readings of the grammar. Elders who are L1 speakers of Itza' were consulted about the content of the pedagogical grammar. Students at the University of Toronto worked on the grammatical aspects of the language. The content of the grammar was reviewed and validated by the L1 Itza'-speaking elders; instructors of the revitalization project; and personnel of the Itza' Linguistic Community. A digital version of this grammar, including audio files, will appear soon via Pressbooks.¹⁰ The inclusion of the audio files in the digital version of the grammar will be crucial for the revitalization of Itza', since it means that L2 learners will have access to the language outside of the classroom. The community members have agreed to having this version of the grammar online.

5.3 L2 learners of Itza'

Several participants reported having received no Itza' language instruction prior to their participation in the revitalization of Itza'. Others reported having taken language revitalization and grammar courses under the direction of the Itza' Linguistic Community, but with a focus on reading and writing, which is different from the approach of this project. Participants expressed that the Oxlajuj Aj immersion program was a unique experience that allowed them to focus on learning to speak the language in real life and in an interactive setting. Furthermore, since the course is delivered in Itza', participants improved their comprehension and their speaking skills in the language with their peers inside and outside of the classroom.

In (28), I provide examples of a short and spontaneous conversation between two L2 learners of Itza', who I identify as Speaker Y (male) and Speaker Z (female). In this conversation, the Itza' L2 learners practice vocabulary (*k'ab'a* 'name,' *na* 'mother,' *tat* 'father,' *b'onil* 'color'), singular possessive markers (*in-* 'my,' *a-* 'your,' *u-* 'her/his'), and questions (*b'ix* 'what,' *b'ik'in* 'when').

¹⁰<https://ecampusontario.pressbooks.pub/>

We can also see that both learners make mistakes in possession and negation, as in (28f) and (28h). In (28f), speaker Z produces the phrase *b'ix uk'ab'a' ana'* with the meaning 'What is your name her mother?' instead of *b'ix ak'ab'a' una'* 'What is your mother's name?' In (28h), speaker Y produces the phrase *B'ik'in b'onil boneltzip?* with the meaning 'When is the color of the pen?' instead of producing *B'a'ax ub'onil b'oniltz'iib'?* 'What is the color of the pen?'. In addition to using *b'ix* instead of *b'a'ax*, speaker Y drops the possessor *u-* in *b'onil* and produces the ejective /b'/ as [p].

(28) Conversation between Itza' L2 learners

a. Y: te' yoos. bix abel?

=te' yoos. b'ix a-b'el?
good morning how ERG2SG-go
'Good morning. How are you?'

b. Z: te' yoos. jach malo'. intech bix abel?

=te' yoos. jach ma'lo'. in-tech b'ix a-b'el?
good morning very good EMPH-ABS2SG how ERG2SG-go
'Good morning. Very well. And you, how are you?'

c. Y: e' toj inwol. e bix ak'aba'?

=toj in-wol. b'ix a-k'ab'a'?
straight EMPH-round what ERG2SG-name
'I am happy. What is your name?'

d. Z: ink'awa ix Z. intech bix akaba?

=in-k'ab'a' ix Z in-tech b'ix a-k'ab'a'?
ERG1SG-name CLF Z EMPH-ABS2SG what ERG2SG-name
'My name is Z. And you, what is your name?'

e. Y: ink'ab'a' aj Y. bix ukab'a' ana'?

=in-k'ab'a' aj Y b'ix u-k'ab'a' a-na'
ERG1SG-name CLF Y what ERG3SG-name ERG2SG-mother
'My name is Y. What is your mother's name?'

f. Y: inna' uk'wa' ix S. bix akaba' una'.

=in-na' u-k'ab'a' ix S b'ix a-k'ab'a' u-na'
ERG1SG-mother ERG3SG-name CLF S what ERG2SG-name ERG3SG-mother
'My mother's name is S. What is your mother's name?'

g. Z: inna' uk'aba' e ix L. e bix ukaba atat?

=in-na' u-k'aba' e ix L. e b'ix u-k'ab'a' a-tat?
ERG1SG-mother ERG3SG-name CLF L what ERG3SG-name ERG2SG-father
'My mother's name is L. What is your father's name?'

h. Y: bik'in. b'ikin b'onel boneltzip?

=b'a'ax u-b'onil b'oniltz'iib'?
what ERG3SG-color pen
'What is the color of the pen?'

6 Contribution of first language acquisition to language revitalization

In §4 of this paper, I examined the Q'anjob'al child's responses to her parents. These diverse interactions allow us to evaluate the forms she produces and the errors she makes, providing valuable insights into her productivity in acquiring Q'anjob'al. Based on the Q'anjob'al child data, in language revitalization, we should encourage learners to speak the language, recognizing that mistakes are an essential part of their learning process. It is advisable to begin with simple conversations and anticipate minimal responses, as reflected in the turn types observed in the Q'anjob'al child data discussed in §4.

In the fields of language documentation and revitalization, understanding child language acquisition is vital. Valuable insights arise not only from analyzing the child's productions but also from her interactions with her parents in natural settings, which are crucial to revitalization efforts. The Itza' revitalization project adopts a child language acquisition-inspired approach that emphasizes learning in naturalistic and enjoyable environments (Maxwell 2012), rather than relying solely on traditional reading and writing methods. This strategy prioritizes speaking and comprehension over written language and linguistic terminology, aligning with the belief that second language acquisition should be experiential and engaging. On the other hand, the teaching strategy created by the Academia de las Lenguas Mayas de Guatemala has predominantly focused on reading and writing, often overlooking the development of speaking and comprehension skills. While this traditional method may be suitable for other widely spoken Mayan languages, it does not adequately address the unique needs of Itza'.

7 Extending the revitalization model of Itza' to other languages

The model of the revitalization of Itza' has attracted the attention of the Ministry of Education of Guatemala, Indigenous activists and scholars working on Mayan and non-Mayan languages, and recently the Academia de las Lenguas Mayas de Guatemala. Local authorities of the Ministry of Education of Guatemala through the School Districts of San José and San Andrés, Petén, are implementing the teaching method and the pedagogical grammar of Itza' in elementary schools to promote the revitalization of Itza'. In 2023, the Department of Education of Petén

printed approximately 2,000 copies of the Itza' pedagogical grammar, which were distributed to elementary school teachers in the municipalities of San José, San Andrés, Flores, and San Benito, Petén. Additionally, the Itza' instructors have been involved in different meetings at the local and national levels with different organizations in finding ways to promote the teaching of Itza', following the teaching method and the pedagogical grammar described above.

In collaboration with native speakers of Indigenous languages and colleagues, I am working on digital pedagogical grammars for Mayan and non-Mayan languages, e.g., Q'anjob'al, spoken in Guatemala; Huastec, spoken in Mexico (Mateo Pedro et al. 2025); and Tal, a West Chadic language spoken in southeast of Jos in Plateau State, Central Nigeria. For Q'anjob'al, I am working with Adan Francisco Pascual,¹¹ Marco Antonio Antonio Mateo, and Ruperto Montejo Esteban, native speakers of Q'anjob'al who have done research in Q'anjob'al. The digital version of the Q'anjob'al pedagogical grammar will be used to teach Q'anjob'al by Adan Francisco Pascual at the Center for Latin American and Caribbean Studies at University of Illinois Urbana-Champaign. For Huastec, I am working with Rubisel Santiago Rosa (native speaker of Huastec), Nadia Takhtaganova (University of Toronto), Lucero Meléndez Guadarrama (Universidad Nacional Autónoma de México), and Lucero Itzel Esquivel Moreno (Universidad Autónoma de Querétaro, Mexico). In collaboration with Samuel Akinbo,¹² I will be creating a pedagogical grammar for Tal, which will be part of a Field Methods course working with Michael Bulkaam Shikpan,¹³ who is a native speaker of Tal and a graduate student at the University of Toronto.

The model for the revitalization of Itza' is being applied for the revitalization of Mayan languages in diaspora – e.g., Kaqchikel and K'iche' in Toronto, Canada. This project is being conducted with the support of native speakers of Kaqchikel and K'iche' who live in Toronto. It is in partnership with Dodem Kanonhsa¹⁴ and is funded by the Faculty of Arts & Science Fund for Indigenous Research Excellence (FIRE). The Academia de las Lenguas Mayas de Guatemala has recently expressed interest in developing similar pedagogical grammars for other Mayan languages, such as Mam, Chuj, and Sakapulteko.

8 Research opportunity

Language revitalization provides a valuable opportunity to collaborate with Indigenous communities and conduct linguistic research. The acquisition of ejectives is a good example of how first language acquisition can inform research on L2 learning of Indigenous languages in revitalization contexts. For example, both children acquiring Mayan languages, such as Chuj and Q'anjob'al, and L2 learners of Itza' deglottalize ejective consonants (Mateo Pedro 2024; Craioveanu & Mateo Pedro 2025). In contrast to children acquiring Chuj and Q'anjob'al, L2 learners of Itza' also overgeneralize ejectives to voiceless consonants. Deglottalization of ejectives

¹¹<https://clacs.illinois.edu/directory/profile/adanf>

¹²<https://akinbosk.github.io/>

¹³https://scholar.google.com/citations?user=37_RNE0AAAAJ

¹⁴<https://dodemkanonhsa.ca/>

tives and overgeneralization of ejectives to voiceless consonants are common in endangered and revitalized languages (e.g., Palosaari & Campbell 2011).

Another study based on audio recordings of the first five lessons of the pedagogical grammar of Itza' (Mateo Pedro et al. 2024) examines vowel lengthening (Mahlmann et al. 2025). Itza' uses ten phonemic vowels: five short (/i, e, a, o, u/) and five long (/i:, e:, a:, o:, u:/) vowels, in addition to the high central vowel /i/. This study reports that vowels written as long in the Itza' pedagogical grammar were much longer than those written as short. It also argues that in these first five lessons, there are more short vowels than long vowels. (29) illustrates how the L2 learner of Itza' attempts to produce the high central vowel /i/. The learner does not seem to produce /i:/; instead, she produces the voiceless affricate as an ejective affricate, deleting the vowel (Mateo Pedro 2024).

- (29) Z: ʔubonil tʃ̥kʰ
 =ʔu-bonil tʃ̥ikʰ
 ERG3SG-color red
 'Its color is red.'

While working on the pedagogical grammars of Q'anjob'al and Huastec, I have seen great discussion not only about how to collaborate with native speakers, but also about topics that had not previously been analyzed (academically) in the grammar of these languages, e.g., reduplication in Q'anjob'al.

9 Recommendations for practitioners

The revitalization of Itza' demonstrates that the Oxlajuj Aj immersion model can be replicated in other Indigenous languages. One of the foremost suggestions to keep in mind is Hofling's (1996) recommendation that language revitalization should involve a long-term partnership between Indigenous communities and an external partner. Documentation researchers should include children in addition to adults, and document conversations as well as narratives. We must remind ourselves that we want to teach L2 learners how to speak a language, so we must provide them a model of listening and speaking.

10 Conclusion

In this paper I have discussed relationships between first language acquisition and language revitalization in Mayan languages, focusing on Q'anjob'al and Itza'. Drawing from Q'anjob'al child data and the Oxlajuj Aj immersion program, in this paper I argue that new learners of an endangered language should be exposed to the spoken form of the language, adopting a communicative approach rather than a grammar-focused approach. While the pedagogical materials developed for the revitalization of Itza' do not draw directly from Q'anjob'al child data, the child data illustrates how children naturally acquire language through conversational interactions

that include repetition, questions, negation, and errors. Therefore, learners of an endangered language should be immersed in the language – to encourage a natural learning experience akin to childhood language acquisition – rather than in instruction concentrating heavily on grammar. I also highlight that language revitalization provides a valuable opportunity to support Indigenous communities, and fosters collaborative research in linguistics. I hope the experience developed for the revitalization of Itza’ will spark interest among Indigenous activists, curriculum designers, researchers, and other scholars working on language revitalization.

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