Comparing Mixean orthographies: Is there hope for a unified writing system?

Carmen Jany
cjany@csusb.edu
Mixean languages & dialects are spoken in Oaxaca, Mexico

290 communities (each speaks its own variety; many are mutually unintelligible)

Linguistic documentation is sparse => prevents a precise division into dialectal & linguistic groupings

=> each community retains its linguistic individuality
Introduction

- Linguistic individuality is reflected in Mixean orthographies
- This talk
  - Mixean language family & language documentation
  - History of orthographies in the region & challenges in Mixean orthography design
  - Case study: Comparing 10 orthographies
  - Discussion & Conclusions
Mixean languages

- **Political division:**
  - 290 villages; 19 municipalities (Torres Cisneros 1997)

- **Geographic division:**
  - lowlands, midlands, highlands

- **Mixean language family**
  - INEA (1994, 1997): Division in Lowland, Midland, and Highland Mixe
  - Wichmann (1995): Further division into North and South Highland Mixe
  - Ethnologue: Division into Eastern, Veracruz (not included above), and Western Mixe
Mixean languages

- Mixean-Zoquean language family

From Wichmann 1995
Mixean languages

- **Oaxaca Mixean language documentation**
  - Only a handful of dictionaries and grammars

<table>
<thead>
<tr>
<th>Dialect</th>
<th>Language</th>
<th>Source</th>
<th>Year</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJ El Paraiso</td>
<td>Lowland</td>
<td>Van Haitsma</td>
<td>1976</td>
<td>Grammar</td>
</tr>
<tr>
<td>Coatlán</td>
<td>Lowland</td>
<td>Hoogshagen</td>
<td>1997</td>
<td>Dictionary</td>
</tr>
<tr>
<td>Chuxnabán</td>
<td>Midland</td>
<td>Jany</td>
<td>2010</td>
<td>Wordlist</td>
</tr>
<tr>
<td>Chuxnabán</td>
<td>Midland</td>
<td>Gregorio Cirilo</td>
<td>2005</td>
<td>Wordlist</td>
</tr>
<tr>
<td>Juquila</td>
<td>Midland</td>
<td>De la Grasserie</td>
<td>1730</td>
<td>Grammar (sketch)</td>
</tr>
<tr>
<td>Totontepec</td>
<td>North Highland</td>
<td>Schoenhals</td>
<td>1982</td>
<td>Dictionary</td>
</tr>
<tr>
<td>Tlahuitoltepec</td>
<td>South Highland</td>
<td>Ruiz de Bravo Ahuja</td>
<td>1980</td>
<td>Grammar (sketch)</td>
</tr>
<tr>
<td>Ayutla</td>
<td>South Highland</td>
<td>Romero-Méndez</td>
<td>2008</td>
<td>Grammar</td>
</tr>
</tbody>
</table>

- Various articles
Each Mixean variety, if documented, established its own orthography (Jany 2010)

Efforts to create a unified writing system showed limited success (Suslak 2003)

1st attempt to develop Mixean orthography by Dominican friar in 1733 (Suslak 2003)

1950s/60s SIL documented several Mixean languages developing unique orthographies for each variety (Benton 1999)
Mixean orthography design

- Acunzo (1991) & others claimed that different orthographies were introduced to linguistically & socially fragment the communities.
- As a reaction, the idea of a unified Mixean orthography was proposed at a regional summit in 1979 (Suslak 2003).
- A local task force was created, but was faced with great linguistic diversity, lack of resources, and local politics (Suslak 2003).
Mixean orthography design

- As a result, initially the unified Mixean orthography was not successful
- Since 2005: (Reyes Gómez 2005)
  - a unified orthography has received more support
  - its implementation has been somewhat successful (BICAP)
  - it included a series of local workshops to train teachers and community members
Mixean orthography design

My work (since 2006):
- Chuxnabán Mixe (Midland)
- Spoken by 900 people
- Orthography developed in 2008 with help of local youth as determined by village officials
- Chuxnabán Mixe Orthography (Ch in Tables)
  - Phonemic orientation
  - Maximum ease of learning
  - Local acceptability
  - Ease of use with computers and new media
Mixean languages

San Juan Bosco Chuxnabán
Mixean languages

San Juan Bosco Chuxnabán
Mixean orthography design

◆ Mixean phonemes
  – Consonant phonemes stable across varieties

Consonant phonemes: p, t, k, ?, m, n, s, ts, tʃ, h, w, j
  – 6-9 vowel qualities; great interdialectal variation

Vowel phonemes: i, y, ï, u, e, ø, o, æ, a

◆ Challenges in Mixean orthography design
  – (1) Using Spanish spelling conventions
  – (2) Representing vowel qualities & laryngeal features
  – (3) Suprasegmental palatalization
Spanish spelling may be applied for

- **Mixean allophones** /b, d, g/ which are phonemes in Spanish
  
  \textbf{Example}: ankeëxp / angeëxp ‘above’

- **Grafeme** <j> for the glottal fricative /h/, since initial <h> is not pronounced in Spanish
  
  \textbf{Example}: joon / boon ‘bird’

- **Phoneme** /k/ as <c,qu, k> in Spanish
  
  Ex. kaaneëj / caaneëj ‘salt water’
  
  keejkypaajk / queejkypaajk ‘humerus’

  kuunëex / cuunëex ‘daughter-in-law’
Mixean orthography design

(2) Vowel qualities & laryngeal features
- At least one vowel not on standard keyboards
- Could be represented using IPA symbols or dieresis as in <ä, è, ï, ö, ü>
- But choice between <ë> and <î> for [ɛ] or [θ] or between ö and ü for [ʊ] not obvious
- Laryngeal vowel features: glottalization and aspiration in vowel nuclei: V’,VV’, V’V,Vh, VVh => apostrophe or IPA for glottalization => <h> or <j> or superscript h for aspiration
(3) Suprasegmental palatalization
- Morpheme or phoneme induced phonological process affecting entire consonant clusters & adjacent vowels
- Perceived as onglide & offglide
- Changes position of affected alveolar & velar consonants toward the palatal region, most evident in t/ts => tʃ (= phoneme in Spanish)
Case study

Comparison of 10 existing orthographies

Table 10-1: Orthographies compared

<table>
<thead>
<tr>
<th>Dialect</th>
<th>Language</th>
<th>Source</th>
<th>Year</th>
<th>Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuxnabán</td>
<td>Midland</td>
<td>Jany</td>
<td>2010</td>
<td>Ch</td>
</tr>
<tr>
<td>Chuxnabán2</td>
<td>Midland</td>
<td>Gregorio Cirilo</td>
<td>2005</td>
<td>Ch2</td>
</tr>
<tr>
<td>San José El Paráso</td>
<td>Lowland</td>
<td>SIL; Van Haitsma</td>
<td>1976</td>
<td>SJ</td>
</tr>
<tr>
<td>Coatlán</td>
<td>Lowland</td>
<td>SIL; Hoogshagen</td>
<td>1997</td>
<td>Coa</td>
</tr>
<tr>
<td>Totontepec</td>
<td>North Highland</td>
<td>SIL; Schoenhals</td>
<td>1982</td>
<td>Tot</td>
</tr>
<tr>
<td>Tlahuitoltepec</td>
<td>South Highland</td>
<td>SIL; Ruiz de Bravo Ahuja</td>
<td>1980</td>
<td>TI</td>
</tr>
<tr>
<td>Ayutla</td>
<td>South Highland</td>
<td>Romero-Méndez</td>
<td>2008</td>
<td>Ay</td>
</tr>
<tr>
<td>All</td>
<td>All</td>
<td>Uniform; INEA</td>
<td>1997</td>
<td>Inea</td>
</tr>
<tr>
<td>All</td>
<td>All</td>
<td>Uniform; Reyes</td>
<td>2005</td>
<td>Rey</td>
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<tr>
<td>Juquila</td>
<td>Midland</td>
<td>De la Grasserie</td>
<td>1898</td>
<td>Qui</td>
</tr>
</tbody>
</table>

* Code used in Tables 10-2, 10-3, and 10-4
Case study

✿ Results: Divergence in four areas
   – (1) Adoption of certain allophonic variations
   – (2) Representations of /k/ and /h/ in regards to Spanish spelling conventions
   – (3) Symbols for less commonly found vowels
   – (4) Suprasegmental palatalization

✿ Variation among SIL developed orthographies (SJ, Coa, Tot, Tla)

✿ Tables also include IPA symbols (IPA) and Spanish spelling conventions (Spa)
Case study

- Results: (1) Allophonic variations; Ex. [b,d,g]
  - Represented in Ch2, SJ, Coa, Qui
- Results: (2) Spanish spelling for /k/, /h/, /tS/
  - /k/: Coa, Tot, Qui
  - /h/: Ch, Ch2, Coa, Tot, Ay, INEA, Rey, Qui
  - /tS/: Ch, Ch2, Coa, Tot, Qui
- Results: (3) Vowel qualities
  - Dieresis: Ch, Ay, INEA, Rey
  - Underlining: Ch2, Tot
  - IPA Symbols: SJ, Tla
Case study

- **Results: (4) Suprasegmental Palatalization**
  - Spanish <ñ>, <ch>: (Ch), Ch2, (Tot), (Qui)
  - Consonant + y: Ch, Ch2, Coa, Tot, Tla, Ay, INEA, Rey
  - Tilde for all consonants: SJ
  - All only represent offglide (except Coa)

- **Uniform orthographies (INEA, Rey) are almost identical**
  - Both avoid representing allophones
  - Both consistently use <y> for palatalization
  - Both use <j> for glottal fricative [h]
Case study

- Uniform orthographies (INEA, Rey)
  - Both use apostrophe for glottalization
  - Both use dieresis for additional vowels
    - But INEA uses both <ë> and <ï> while Rey only uses <ë> for the high central vowel
  - Show consistency by being phonemic & by preferring symbols easily available on keyboards
    - Help learnability of the orthography
    - Contribute to its ease of use,
    - Ultimately contribute to its widespread use
Conclusions

- Difficult to design a spelling system in a linguistically & dialectally diverse and understudied region.
- Mixean communities generally favor Spanish spelling conventions & prefer dialectal particularity over multidialectal uniformity.
- This work highlights the complexity of orthography design in a region with limited intellectual and economic resources to unify local communities and to ensure widespread impact.
Conclusions

- Social, political, and cultural acceptability represents a key factor in the sustainability of an orthography (Sebba 2007)
- This ultimately contributes to the success or failure of language documentation and revitalization
Dios kujuuyëp!