A problem in Totonac orthography

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The language of the Sierra Totonac people of Mexico has been studied by linguists of the Summer Institute of Linguistics, Inc., during various periods in the years 1938–1968. The practical orthography chosen to represent the sounds of that language was given official approval by the Consejo de Lenguas Indígenas. Some changes were later made in order to make it conform more closely to Spanish (the national language), namely: \( k \) to \( c/qu \), representing \( [k] \); \( q \) to \( k \), representing \( [\k]\); \( w \) to \( hu \), representing \( [w] \). Totonac speakers who had previously learned to read in Spanish experienced little difficulty in making the transfer into reading Totonac, as far as the representation of sound by symbol was concerned.

During this period, several books were published in limited editions and distributed among the speakers of Totonac. Besides calendars and wall plaques, these included various folk tales, a beginning primer, a hymnal, *Aesop's Fables*, a dictionary (containing, besides lexical items, a brief sketch of the major grammatical features of the language), and the New Testament.

When one of the departments of Indian education, operating under the Ministry of Education, was ready to begin a “promotor” program among the Totonac, a primer and workbook were prepared. In the course of examining these books, the use of two symbols was questioned. These were: \( k \) for \( [\k] \), and \( x \) for \( [\s] \). The proposed changes were: \( c/qu \) for \( [\k] \), and \( ch \) for \( [\s] \).

From both a linguistic and pedagogical point of view, these changes proposed serious difficulties for a reader of Totonac, since \( k \) contrasts with \( [\k] \) in identical environments, as shown in the following:

\[ xacay \ [\s\k\i\a\i] \text{‘he scrapes it’ and } xakay \ [\s\k\i\a\i] \text{‘he spends it’} \]

scatan [skatan] ‘temazate’ and skatan [s katan] ‘plum’

mactum [maktum] ‘something smooth’ and maktum [ma k̃tum] ‘once’

[ č] and [ ŝ] also contrast in identical and analogous environments:

chu’n [ č ŭ?n] ‘buzzard’ and xu’n ťû?n] ‘bitter’

chu’chut [ č ŭ? čut] ‘water’ and xuxut [ ŭšut] ‘mould’

chichi’ [ či či?] ‘dog’ and chixit [ či šit] ‘hair’

Furthermore, [ ŝ]-[i š] has two grammatical functions: it appears as a noun prefix (indicating third person possessive), and as a verb prefix (indicating a past continuative aspect).

When certain words used in the primer were rewritten with ch for x, they demonstrated difficulties which would confront the reader. The following examples in the two orthographies show confusion of [ ŝ] and [ č] in the same word as well as in pairs, and problems with h following ch:

‘his dog’ ixchichi ichchichi

‘young ear of corn’ xihuit chihuit

‘stone’ chihuix chihuich

‘cow’ huacax huacach

‘his cow’ ixhuaucax ichhuaucach

It was finally proposed that any decision to be made should be based upon the criterion of what would make for easier learning for the six-year-old child in beginning reading. How to discover this presented a problem.

Four solutions were suggested and considered: (because of its heavy function load, more attention was focused on the x than on the k, although both were considered as problems).

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1. That \( x \) be written as \( sh \). It was pointed out, however, that this would doubtless draw even sharper criticism since it departs completely from the Spanish system, conforming rather to the English.

2. That the teaching of \( x \) be omitted from the government primer, since its purpose was to lead the child into the use of and reading of Spanish, using his mother tongue as a means to that end and not as an end in itself. However, a quick appraisal of the content of the primer showed that it would have seriously limited the vocabulary which was already extremely restricted. Since the governmental department wanted this primer usable in two divergent dialects of Totonac (of about 30 percent mutual intelligibility), great pains had been taken to find vocabulary items that were common to both. To have omitted the teaching of both the \( k \) and the \( x \) would have left so few words as to render the primer completely useless as a teaching device in both dialects of Totonac.

3. That testing be done by teaching two groups of Totonac children to read, using the proposed changes of orthography in one group, the old orthography in the other. This idea had to be discarded as being impractical within the time remaining before the beginning of the promoter training program because of the difficulty of gathering such groups, the unavailability of trained teachers, and the need for time for an evaluation of results.

4. That the readability of the two sets of symbols be tested by observing the reaction of “naive readers” when confronted by texts with the orthographic changes. “Naive readers” was defined as meaning Totonac speakers accustomed to reading in Spanish but not Totonac.

This last alternative was chosen as being the most feasible procedure under the circumstances.

Subjects for testing were three young Totonac men who, being sufficiently trilingual (Totonac-Aztec-Spanish), had been employed as promotores in the Aztec program for the preceding four years. These young men were contacted through their supervisor at their center for continuing education located in the Sierra of the state of Puebla.

Great care was taken in the presentation of the problem to avoid prejudicing the subjects towards or against any one particular choice of symbol. They were reminded, however, of the criticisms they had encountered in the Aztec program, and all seemed to be in accord that, if possible, excuse for such criticisms should be avoided in the Totonac program.

They were each given a typed script (here termed Copy A for convenience of reference) of a Totonac folk tale in which the proposed orthographic changes had been made, that is, \( c/qu \) for both \( [k] \) and \( [k] \), \( ch \) for both \( [c] \) and \( [s] \). They took turns reading the tale aloud. All tended to read \( ch \) as \( [c] \); never as \( [s] \). There was consequent stumbling and prolonged hesitation to the extent that it became quite apparent that they were not able to read the material.

In order to focus upon the \( c/qu \) as the symbol for \( [k] \), another script was given the subjects. Copy B, in which the \( c/qu \) was retained to indicate both \( [k] \) and \( [k] \) and \( x \) was used for \( [s] \). The subjects continued reading in turn, starting where they had left off in Copy A. Greater ease in reading was noted, but there was still a lack of fluency.
A printed copy of the story was then shown to them, with the old orthography, that is, using both $k$ and $x$. All the subjects agreed that they did not like the idea of using the $k$ for $[\mathcal{k}]$, but were somewhat hesitant as to whether it should be written as $\text{c/qu}$.

It was then suggested that the digraph $\text{cg}$ be used to indicate $\mathcal{k}$. The subjects were given a third copy (Copy C) of the story which incorporated this change. There seemed to be much more agreement on the use of $\text{cg}$, though a sense of hesitancy on the part of one promoter was detected. However, he finally agreed with the others that this symbol should be used.

It is obvious that this form of testing was far from perfect and that it ignored many variables that might also contribute to lack of fluency in reading. However, the evidence that these teachers could not read the $[\mathcal{\text{s}}]$ when symbolized by $\text{ch}$ was so marked that it was recognized that such a change would not in fact be feasible.

The use of $\text{cg}$ for $[\mathcal{k}]$ was agreed upon as being a workable compromise. To be sure, some material has already been published using $k$. However, it is believed that this will not prove to be a major difficulty since the distribution of literature has not been extensive and not many new learners will be confused. It is believed also that the increase in general education likely to be brought about by the promoter program will more than compensate for this discrepancy. Furthermore, it should be noted that the New Testament is in the process of being revised in the Sierra dialect; it has not yet been translated in the Northern dialect. It is uncertain at this writing whether or not $\text{cg}$ will be used in these New Testaments.

It has often been observed by educators, anthropologists, and linguists that matters of orthography tend to produce great emotional tensions between the parties involved. Tucker (1952:10) states: “It is unbelievable the degree of almost murderous heat that can be generated, and the hysteria with which the silliest of arguments [over orthography] can be defended.” Smalley (1963:14) states: “The ways in which these emotional factors will enter into the acceptance of a writing system … remains one of the great critical problems in this field. Some workers have paid altogether too little attention to the problem, with occasional lamentable results.”

The case of the Totonac orthography was no exception. Emotional tensions were strong because of the basic conflict between linguistic, pedagogical, and sociological factors. This might have created a stalemate with no solution being reached at all, or else to have produced a decision at a very high price in severed relationships.

Since this problem of orthographic change was solved without destructive consequences, it might be profitable to note the following points which may be pertinent to other like situations:

1. Recognition of the need for courtesy. A demanding or domineering attitude could make negotiation impossible.

2. Recognition of the need for time spent in looking at the problem in general, without focusing specifically on the controversial points. In this case, some time was spent in evaluating the primer as a whole before taking up the orthographical problem.
3. Recognition of the need for time to consider and evaluate the tests and discussion. In this case, the testing was done about one week after the first discussion, and the final decision was reached about five months after the testing. Thus opportunity for “cooling off” was provided in two stages.

4. Recognition of the need for open-mindedness, and the recognition of different kinds of problems. In this case it was a matter of linguistic and pedagogical considerations versus sociopolitical considerations.

5. Focusing attention upon the main objective. In this case, the objective was to teach the six-year-old child to read as easily and painlessly as possible.

6. Focusing attention upon specific criteria for making a decision that contribute directly to the main objective. In this case, the criterion was whether changes in orthography would make it easier or more difficult for the small child to learn to read.

7. Willingness to test, even though it may mean a considerable expenditure of time, energy, and money.

References


Smalley, William A. 1964. Writing systems and their characteristics. In Smalley 1964a:1–17. See also Smalley 1964b Bibliography (Literacy) Citations


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