

Bolivia Deaf Community and Sign Language Pre-Survey Report

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Abstract

The purpose of this report is to provide information about the current language-development status of Bolivian Sign Language (LSB). Current research was reviewed and interviews were conducted to determine if there is one, or more than one, unified sign language in Bolivia. If there is one or more unified sign language, for adaptability reasons, it is important to know if the sign language is similar to any other sign languages where language development is either complete or in progress. It has been reported that the sign language used in Bolivia is derived from American Sign Language (ASL). Relevant research to comparisons of LSB with other sign languages was reviewed. Based on the information obtained, recommendations are made as to the necessity for language survey and what type of survey would be best to use to determine if a language-development project is feasible and/or necessary.

1. Introduction and Purpose

The purpose of this report is to provide information about the current language-development status of Bolivian Sign Language (LSB).¹ Current research was reviewed and interviews were conducted to determine if there is one, or more than one, unified sign language in Bolivia. If there is one or more unified sign language, for adaptability reasons, it is important to know if the sign language is similar to any other sign languages where language development is either complete or in progress. It has been reported that the sign language used in Bolivia is derived from American Sign Language (ASL). Relevant research to comparisons of LSB with other sign languages was reviewed. Based on the information obtained, recommendations are made as to the necessity for language survey and what type of survey would be best to use to determine if a language-development project is feasible and/or necessary.

This report describes a linguistic and sociolinguistic review of information related to the Bolivian deaf community and their sign language(s). Bolivia is one of two landlocked countries in South America (see figure 1). Bolivia is divided into nine departments (see figure 2): Beni, Chuquisaca, Cochabamba, La Paz, Oruro, Pando, Potosi, Santa Cruz, and Tarija. It gained independence from Spain in 1825.

The land mass of Bolivia is approximately 418,000 square miles (1.08 million square kilometers). The capital city, La Paz, 11,910 feet altitude (highest elevation of any administrative capital in the world), has a population of over 800,000. The population of La Paz is a little over 1.5 million, including the surrounding metropolitan areas. Other large cities are Santa Cruz, population about 1.15 million; Cochabamba, over 800,000; El Alto (a suburb of La Paz) population about 728,000; and Oruro and Sucre, with a population of over 200,000 each.

¹ Interviews were conducted, as well as some research gathered and reported by Jason and Elizabeth Parks, SIL International, Americas Area sign language survey team.



Figure 1: Map of South America (Infoplease 2000–2007b).



Figure 2. Map of Bolivia with large cities identified (Infoplease 2000–2007a).

This research investigated and gathered information needed for as global a view of the language community situation as possible. In addition to language unity and classification, some sociolinguistic aspects of this language group were investigated. These include social factors that influence language use and could ultimately influence language-development projects.

2. Location and Population Distribution/Demographics

The population of Bolivia is over 9 million people. The urban population of Bolivia is approximately 63% of the total population (UN Habitat n.d.). The Ethnologue lists forty-four languages for Bolivia. Of those, thirty-six are living languages, one is a second language with no mother-tongue speakers, and seven are recently extinct (Gordon 2005). Spanish, Quechua, and Aymara are all listed as official languages in Bolivia. One of the living languages listed in the Ethnologue is Bolivian Sign Language [BVL]. The Ethnologue reports 350 to 400 users of this sign language living in Cochabamba, La Paz, Riberalta, and Santa Cruz. It also reports that Bolivian Sign Language, is “based on American Sign Language with necessary changes for Spanish spelling” (Gordon 2005:222). This would indicate the changing of things like handshape that represent letters. For example, the ASL sign for ‘church’ with the C-handshape tapping the

back of the hand is changed in LSB to an I-handshape tapping the back of the hand. The I-handshape reflects the Spanish word for ‘church’, *iglesia*. The number of sign language users reported in the Ethnologue is based on research from 1988 (20 years old). The current number of LSB users is likely to be significantly higher. As evidence, at a recent celebration on the World Day of the Deaf in Bolivia, approximately one thousand people from the Bolivian Federation for the Deaf gathered to protest the marginalization of the Deaf in Bolivian Society (El Mundo 2008). The number of schools and associations of the deaf listed in sections 5.1 and 5.2 also indicate the potential for a much higher population of sign language users in Bolivia.

Deaf people of Bolivia live scattered throughout the country, with higher concentrations in large cities. The number of deaf reported is dependent on the definition that is used of what it means to be deaf. The socio-cultural definition centers on sign language use and an awareness and involvement within the unique culture of deaf communities; alternatively, the physiological-medical definition is based on the degree of hearing loss.

This research primarily focused on the deaf communities whose ethnolinguistic identity includes the use or potential use of sign languages. The Ethnologue reports the deaf population of Bolivia to be 46,800 (Gordon 2005:222). One researcher, working in Beni State in Bolivia, found that there was not sufficient information available to provide an accurate number for the total deaf population. He reports, “We found there was no data for Beni State, except from our own sources, and the little data available for Bolivia was either self reported or indirectly related to the health aspects of hearing impairment (Santana-Hernández 1997).” Thus, an accurate population of deaf persons in Bolivia is not available. The closest estimate is provided by Dr. Jay Charles Soper, SIL International Americas Area Sign Language Initiative Director. He has worked out a formula for determining the potential population of deaf members of a community who have sufficiently limited hearing that they are users of a Sign Language (SL) as their primary language, or would be if they were in contact with other SL users (Soper 2008). This formula is based on certain assumptions about the availability of resources and wealth, the connection between these two and improved health care, and the level of health care affecting the potential increase in deaf population. These factors are determined by two indicators, Gross Domestic Product per capita adjusted for Purchasing Power Parity (GDP PPP). The GDP PPP is a standard measure for wealth. Dr. Soper estimates a population of 23,000 deaf in Bolivia who are users of Sign Language, or would be, if in contact with other SL users.

The majority of deaf people are found in the larger cities, like the ones previously identified: La Paz, Santa Cruz, Cochabamba, El Alto, Oruro, and Sucre. Other cities and towns also have deaf populations, as evidenced by schools for the deaf, deaf organizations, or informal gatherings of the deaf. Some of those locations are: Trinidad, Tarija, Potosí, and Chuquisaca.

3. History of the Sign Language

There is not much information available about the history of sign language use in Bolivia. According to Huanca (2004), the LSB is based on ASL. It was established in the 1970s by American missionaries who came and taught ASL. Since then, efforts have been made to contextualize LSB, incorporating local signs.

This is confirmed by the research conducted by former SIL members Mike and Karla Hurst, as well as by email communication and interviews conducted by Jason and Elizabeth Parks, currently working in SL survey for SIL’s Americas Area. According to the Hursts’ (2002) research, there may be two distinct sign languages used in Bolivia. One of them, introduced by missionaries in 1973, is based on ASL and has incorporated local indigenous signs. This form of

ASL was introduced in Cochabamba and has likely spread to other areas. Another pre-existing sign language may also be present; the Hursts reported that this other sign language may be used in Catholic circles and in La Paz.

In addition, more recent email communication also confirms this. An email from Paola Innocente (2007), a LSB sign-language interpreter, teacher at a deaf school, and coordinator of a deaf ministry, reports that ASL was introduced about 30 years ago by missionaries from the United States (US). She reports that there was a pre-existing sign language, but that has been “overtaken” by ASL and she only knew of a few deaf people who knew anything about the former SL. She reports that ASL has been somewhat contextualized into the Bolivian context and that between 70% and 80% of the SL is ASL. This is her estimate and is not based on empirical evidence.

4. Review of Research Related to the Sign Language

There has been very little academic research related to LSB, but some of what is available has provided some important contributions. In addition to the *Primero Libro de Señas en Bolivia* (First Book of Signs in Bolivia), published by the Bolivian Ministry of Education and Culture (1992), Mike Morgan (ref.) has produced two significant papers that involved comparisons of the sign language in Bolivia with ASL. Other information related to the deaf and sign language in Bolivia is available on the Internet, but it generally relates to more social and historical information, than to linguistic factors, and is often incorporated into data referencing all disabilities, not just deafness.

5. Sociolinguistic Factors Relevant to the Deaf Community

5.1 Education

There are a number of schools for the disabled, some of which include accommodations for the deaf or are focused on the deaf. In spite of this, Santana-Hernández reports the following: “Also, in a report by M. Guevara, on people living with disability in Bolivia, it was stated that only 1.6% of persons with Disabling Hearing Impairment are included into educational or work productive settings and only 6% of the population living with a disability or learning difficulty are integrated in Bolivia (Santana-Hernández n.d.).” Figure 3 lists some of the schools with the number of students each can accommodate, where this information is available. This information is very likely incomplete, but it gives an idea of what is available.

School	Potential # of Students
Carachipampa Christian School, Cochabamba	?
Centro Audiológico Multifuncional, Cochabamba	capacity 51
Centro Cristiano para Sordos (Christian educational vocational center for the deaf, boarding school)	54 aged 5 to 19 in 2001
Centro de Audiología, Chuquisaca	capacity 45
Centro de Educación Auditiva (CEADI), Provincia Cercado	capacity 20
Centro de Educación Especial, Cochabamba	60 hearing-impaired and learning-problem students
Centro Integrado No Oyentes Magda de Sanjines“CINOMS” Santa Cruz	capacity 59
Centro Integrado para Sordos Villa Ingavi, Cochabamba	capacity 52
Escuela de Niños con Discapacidad Auditiva, Chocabamba	capacity 42
Escuela de Niños y Adolescentes Sordos, Santa Cruz	?
Escuela Integral de Sordos, La Paz	capacity 30
Instituto de Audiología – Cochabamba	capacity 95
Instituto de Educación Especial para Niños Sordos, Zona Obrajes	49 children and young adults
Instituto de Educación y Prevención para la Sordera, Beni	?

Figure 3. Schools and institutions that service the deaf.

5.2 Organized Social Groups for and/or by Deaf People: Deaf Associations, Organizations, Clubs, and Disability Organizations

There are a number of Deaf Associations, Organizations, Clubs, etc. that are active in Bolivia. Some of these associations, organizations, and clubs are listed here. Given that this is an incomplete list, it can be assumed that there is an active sign-language community.

Asociación de Sordos Beni – ASORBENI ,
 Asociación de Sordos Chuquisaca – ASORCH
 Asociación de Sordos Cochabamba – ASORCO
 Asociación de Sordos Oruro – ASORU
 Asociación de Sordos Potosí – ASORPO
 Asociación de Sordos Santa Cruz – ASOCRUZ
 Asociación de Sordos Tarija – ASOTAR
 Asociación Integración de Sordos de La Paz – ASISORPAZ
 Centro Audiológico de Sucre
 Centro Audiológico Multifuncional
 Centro de Educación auditiva – CEADI
 Centro Integral para Sordos
 Comité Departamental de la Persona con Discapacidad – CODEPEDIS, which has separate groups in various locations, including Cochabamba, Oruro, Potosí, Santa Cruz, and Tarija

Federacion Boliviana De Sordos "FEBOS"
 Federación Deportiva Boliviana Integrada de Sordos (FEDEBOISO)
 Instituto de Educación Especial para niños sordos
 Integrantes de ASISORPAZ – Asociación Integración de Sordos de Bolivia
 La Federación Boliviana Integrada de Sordos

5.3 Religion

There are several Christian schools and missions that work with the deaf in Bolivia. One teacher, at Centro Cristiano para Sordos, is the daughter of the missionaries who began to teach ASL to the deaf in Bolivia. Another Christian School is Carachipampa Christian School. Other Christian ministries or organizations that minister to the deaf also exist. There is at least one deaf church with a deaf pastor, possibly more. Efforts by other religious organizations may be underway, but no information was found regarding these.

5.4 Employment and Income

According to information from the Bolivia entry in the on-line CIA – The World Factbook, “Bolivia is one of the poorest and least developed countries in Latin America.” The unemployment rate is 8%, while underemployment is widespread. Approximately 60% of the population lives below the poverty level. Given the information from section 5.1, only 1.6% of those with hearing impairment that is disabling are included into work-productive positions, it can be assumed that the majority of the deaf are among the 60% living below the poverty level.

6. Linguistics and Language Use

6.1 Sign Language Distinctives

Based on the history of sign language in Bolivia, it is evident that there may have been an indigenous SL that existed prior to the 1970s. The extent to which that SL was unified, and whether it was in widespread use, is unknown. What is known from interviews and other available information is that around 1973, American missionaries, the Powlisons, began to teach ASL in Bolivia. According to one person who has worked extensively with the deaf community in sign language interpreting and translation, ASL was “imported about 30 years ago by missionaries from the USA. So the original SL...was overtaken by ASL” (Innocente 2007). The community is apparently aware of the pre-existing SL and is trying to define and revive the remaining knowledge of this SL.

Although very little formal research on the sign language in Bolivia has been conducted, Mike Morgan has produced two significant papers comparing the SL in Bolivia with ASL, using three different types of comparisons. In his comparisons, he chose lexical items that “were known to vary among the varieties of the language group in question and thus be of interest for this study, rather than some Swadesh-like list of “basic” vocabulary where most of the items would presumably **not** vary among the group and therefore be of no use to indicate divergence” (Morgan 2004:5). Morgan used data found in Shroyer and Shroyer (1984) from seventeen states: Alabama, Arkansas, California, Colorado, Hawaii, Kentucky, Louisiana, Maine, Michigan, New Mexico, North Dakota, Ohio, South Dakota, Texas, Virginia, Washington, and Wisconsin. This data was compared to data from LSB found in Ministerio de Educacion y Cultura (1992). A total of seventy-nine lexical items were compared. In the conclusion of his paper, Morgan reports that

“Bolivian Sign Language is indeed a member of the ASL Sign Language family. In fact, on average, LSB was more closely related to a majority of other ASL dialects than those dialects were to other less core ASL dialects.”

6.2 Language Vitality

Some of the indicators of vitality for a sign language are the number of schools teaching sign language, the number of people using the sign language, the number of deaf associations and clubs, the numbers of deaf signers at gatherings of deaf people, and the spread of the sign language. It is apparent from the information in sections 5.1 and 5.2 that there are a significant number of schools, associations, and clubs spread throughout the country. The number of deaf signers that attend these schools or meetings is not known, however, the fact that the Bolivian Federation for the Deaf (FEBOS, mentioned in section 5.2) was able to mobilize approximately 1000 people for a celebration on the World Day of the Deaf is impressive and a good indicator of potential vitality (El Mundo 2008). Also, reports from people interviewed indicate that the introduction of ASL, which began in the early 1970s, has spread throughout many parts of Bolivia to the point where it has mostly replaced any pre-existing indigenous sign language.

6.3 Literary Development

The Bolivia Ministry of Education and Culture has produced a “First Book of Signs in Bolivia,” Ministerio de Educacion y Cultura (1992). In addition to this, the Bible Society in Bolivia has undertaken a project to translate some stories into the sign language in Bolivia. Paola Innocente worked on this project, translating some of the stories and working on a dictionary of biblical signs for use with the project (Innocente 2007).

7. Conclusion

Based on information in this report, it is apparent that there is a sign language in use in Bolivia. This sign language is based on ASL and is very likely in widespread use throughout the country. A sign language may have existed prior to the introduction of ASL, but ASL has largely, if not almost completely, replaced any pre-existing sign language. It is also apparent that there is a need for language development in this sign language, since the Bible Society in Bolivia has already started one such project.

8. Recommendations

Based on the preceding information, it is apparent that the current SL situation in Bolivia is heavily influenced by ASL. It is known that the dominant SL in Bolivia is a variety of ASL. In addition, the research by Morgan indicates that the SL in Bolivia patterns closely with some of the core dialects of ASL in the US. Given this information, the recommended strategy would be to test available ASL materials in Bolivia to see if they can be used as they are, or if, as is more likely, some adaptation to the variety of SL in Bolivia is needed. Thus, some survey is needed, but not a language distinctives type survey, rather an extendibility of existing materials survey. This is something like doing translation checking using a translation that was developed for one language group with another language group. See the report “Testing the Extendibility of the Gullah Translation to the Bahamas” by David and Holly Holbrook (1997) for a detailed report of one such survey, which provides an explanation of this type of survey.

References

- CIA – The World Factbook. 6 March 2008. Bolivia. Retrieved March 18, 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/bl.html>
- El Mundo. 14 March 2008. [Celebración en el día Mundial del Sordo fue con peticiones de no exclusión social](http://www.elmundo.com.bo/Secundaria.asp?edicion=21/09/2006&Tipo=Comunidad&Cod=6073b). Retrieved March 14, 2008 from <http://www.elmundo.com.bo/Secundaria.asp?edicion=21/09/2006&Tipo=Comunidad&Cod=6073b>
- Gordon, Raymond G. Jr. (Ed.). 2005. *Ethnologue: Languages of the world*. Dallas, TX: SIL International.
- Holbrook, David and Holly. 1997. Testing the Extendibility of the Gullah Translation to the Bahamas. SIL International, Americas Group unpublished report.
- Huanca, Dany Elí Illanes. 2004. Un enfoque de introducción general a la discapacidad auditiva y la educación : Elementos generales de la situación de la discapacidad auditiva en cifras, limitaciones en el aprendizaje y un enfoque hacia la educación. Retrieved March 14, 2008 from http://www.geocities.com/umsada/trabajo6.htm#_ftnref9.
- Hurst, Mike and Karla Hurst. 2002. Sign Language Survey – Research Phase: SIL Americas Group (including Central and South America and the Caribbean). Dallas, TX: SIL International unpublished manuscript.
- Infoplease. 2000–2007a. Map: Bolivia. Pearson Education. Retrieved March 17, 2008 from <http://www.infoplease.com/atlas/country/bolivia.html>.
- Infoplease. 2000–2007b. Map: South America. Pearson Education. Retrieved March 17, 2008 from <http://www.infoplease.com/atlas/southamerica.html>.
- Innocente, Paola. 25 October 2007. Email to the authors.
- Ministerio de Educacion y Cultura (1992). *Primero Libro de Señas en Bolivia* [First Book of Signs in Bolivia]. Bolivia: UNICEF.
- Morgan, M. W. 2000. The Search for the Roots of Bolivian Sign Language: Sign Language Dialect Classification Using a Cluster Analysis Model. *Preliminary Papers for the 26th JASL Conference*. 34–37.
- Morgan, M. W. 2004. Tracing the family tree; tree-reconstruction of two sign language families. Paper presented at the 8th conference of Theoretical Issues in Sign Language Research, Barcelona, Spain, September 30–October 2, 2004.
- Santana-Hernández, Diego J. (no date). Setting up a programme for prevention of hearing impairment in Bolivia. Foundation Totai. Retrieved March 20, 2008 from http://www.totaifoundation.com/Article_1_Setting_Up_A_PPHI_in_Beni_State_Bolivia.html.
- Shroyer, E. H. and S. P. Shroyer (1984) *Signs Across America: A look at regional differences in American Sign Language*. Washington, D.C: Gallaudet College Press.
- Soper, Jay Charles. 2008. Estimated deaf population and Sign Language Bible translation status. Bogota, Colombia: SIL International unpublished manuscript.

UN Habitat – United Nations Human Settlement Programme. (no date) Bolivia. Retrieved March 18, 2008 from <http://www.unhabitat.org/categories.asp?catid=139>.