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## **Project-Based Pedagogy for Classrooms: an Alternative for Teaching Written Spanish to First-Cycle Children**

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**ABSTRACT – Project-Based Pedagogy for Classrooms: an alternative for teaching written spanish to first-cycle children.** In this paper the analysis of the educational intervention carried out in deaf students from cycle 1 of the Federico García Lorca School, governmental Educational Institution of the city of Bogotá is presented. The intervention proposal arose from the need to document the work done with the student with hearing loss in the teaching of Spanish as a second language, because the country has no research to account for this process. This document is not intended as a recipe of how to start the process of reading and writing in Spanish in deaf children; on the contrary, it presents some teaching suggestions that may be useful for teachers who venture into this arduous work.

**Keywords: Education. Deaf. Pedagogy. Second Language. First Language.**

**RESUMEN – La Pedagogía por Proyectos de Aula: una alternativa para enseñar castellano escrito a niños y niñas de primer ciclo.** En este documento se presenta el análisis de la intervención educativa llevada a cabo en estudiantes sordos del ciclo 1 del Colegio Federico García Lorca, Institución Educativa de carácter oficial de la ciudad de Bogotá. La propuesta de intervención surgió de la necesidad de documentar el trabajo realizado con los escolares con limitación auditiva en la enseñanza del castellano como su segunda lengua, debido a que en el país no se cuenta con investigaciones que den cuenta de dicho proceso. Este documento no pretende ser un recetario de cómo se debe iniciar el proceso de lectura y escritura del castellano en los niños y niñas sordos, por el contrario, presenta unas sugerencias didácticas que pueden ser de gran utilidad para los docentes que se aventuren en esa ardua tarea.

**Palabras-clave: Educación. Sordo. Pedagogía. Segunda Lengua. Primera Lengua.**

## **Contextualization of the education current situation of Colombian deaf children**

This intervention was developed in a public school in Bogotá, primarily intended to implement a teaching strategy that allows teachers from schools with deaf children, to have a guide on how to approach the Spanish teaching as a Second Language, in children with hearing impairment who begin their schooling and literacy processes.

In Colombia there is no curriculum or standards established to address the teaching of the second language in deaf children, so teachers who take on the challenge have to implement a series of strategies to achieve their goals, due to that this proposal is innovative when responding to a need for a specific population, and attempts to resolve some concerns regarding the process of reading and writing development, focusing them as a Second Language in this population.

The history of education in Colombia, as the history of all educational processes for people with limitations in the Western world, has a great influence of the initial vision of inability to develop thinking and communicating, it means disability prevailed for a long time as a clinical and therapeutic concept; this idea placed deaf communities in the group of *people who could not access to the formal education system*, because of their difference.

A very high percentage of the Colombian deaf population, belongs to a hearing family it means that their parents, brothers, uncles, grandparents and other relatives use oral language to communicate. Consequently, deaf children in their families do not have the opportunity to learn and develop naturally their first language; they begin with this process just when they go to school for the first time. In addition, most of those families are unaware of the qualities of the community to which deaf children belong, a group that has developed a visual- gestural code to communicate naturally, it is called Colombian Sign Language, and it is used by people who cannot communicate orally.

From the foregoing information, another important aspect is drawn, it is that Colombian deaf children naturally do not acquire Spanish (the major oral language of the country) in the same way as hearing children do, but they learn when they start their formal education after an initial process of approaching their first language, the Colombian Sign language (CSL). This special condition causes the teaching object to get new challenges at school because the deaf girl or boy, should think and conceptualize in a language of a visual- gestural nature (CSL) and read and write in another language of oral nature (Spanish), two totally different languages in their grammatical, semantic and pragmatic structure.

According to the situation described above, an intervention proposal is designed, which aims to generate a work alternative for those

teachers who take on the challenge to start a literacy processes with deaf children in the initial cycle of formal education.

## **Framework**

To develop the intervention, theoretical postulates were considered as framework to allow the work with deaf children in a contrastive and systemic way.

## **Hearing Impairment: deaf person**

From a socio – anthropological perspective, the deaf subject is defined as a person who basically uses a visual – gestural language which makes him/her different linguistically and member of another linguistic community. It is primarily a person who uses the visual channel for communication, for example, deafness is constituted as a visual experience rather than a hearing impairment. “The visual experience of deaf people includes all kinds of meanings, representations and / or productions in the intellectual, linguistic, ethical, aesthetic, artistic, and cognitive fields, etc.” (Skliar, 1999, p. 5).

## **Colombian Sign Language**

Sign language is the natural language of the deaf person, it is a true natural language with its own structure and vocabulary that allows an indefinite number of statements about any aspect of reality or fantasy, the only difference with oral languages is that it is performed in three dimensional space and uses a visual – gestural channel (Tovar, 2011, p. 45).

Colombian Sign Language was recognized in Colombia as the official language of the deaf community in the country with Law 324 of 1996.

In Colombia the deaf community uses sign language as any other human group to communicate and constitutes the essential vehicle of socialization, negotiation, and transmission of cultural values.

## **The Spanish as a Second Language in Deaf Children**

The development of Spanish in its read and written modes in deaf children is still under research and analysis, although significant activities are implemented to develop language skills in the first language, the development of the second language presents a series of difficulties related mainly to the phonological difference of the two languages acquired by the deaf student.

It is noteworthy that a child or deaf girl at school age is conducting two processes simultaneously, it is acquiring a first language to communicate, interact, conceptualize, and is also learning to read and write in a language with a different grammatical structure, therefore the teaching of this second language cannot be developed under a traditional model of separated subjects with a previously established content by national standards, but should be included as a *lingua franca* to get other school subjects.

In this sense, it is necessary for the development of the second language, working in the framework of the Project-based teaching to achieve the integrity of contents in all areas, due to the development of Spanish as a second language in deaf children is seen as an unsystematic process because of the characteristics of the population.

One and perhaps the most important of those characteristics is that in people phonology plays an important role for learning words in its written form; it is evident that this process has very marked differences in a deaf child as he/she would be required to use another mechanism to represent words; this mechanism would be logographic, which makes it relevant and necessary to develop a methodological approach to direct orderly and systematically this learning process.

### **Curricular Flexibility**

For purposes of this proposed intervention, authors who make a conceptual approach to curricular flexibility are retaken, it is worth noting that in the specialized literature when it comes to talk about flexibility, it appears as something inherent to the curriculum and it is not given special care and treatment but as a concept, as proposed by Lemke (1978), it is something more administrative, organizational and related to changing paradigms.

This author defines flexibility as “[...] a group of movements that tend to initiate educational change with the act of learning. The central problem to be solved is how the act of learning from the point of view of the learner in a way that meets their needs, interests and problems (NIPs)” (Lemke, 1978, p. 48). Taking into account this approach, education of deaf children requires a series of movements that mainly enhance language development in their first language, Colombian Sign Language, which becomes a vehicle for access to knowledge and enhancer for the learning processes. Therefore, in this didactic proposal, significant activities that allow the deaf student make a real conceptualization in their first language and then start the process of literacy in written language will be made.

## Literacy in Deaf Children

Alphabetize a person is a complex process in itself because it involves a number of aspects of social order and also individual, changing from decoding to involve higher cognitive processes. Taking into account the above aspects and if it is added the condition of deafness in the child who is alphabetized, the process will become more complex because the deaf children in Colombia do not learn Spanish naturally, in the same way as a hearing child does, but when starting the educational system deaf children must learn it at the same time they are literate, it means a deaf boy or girl learns the Colombian Sign Language (first language) and simultaneously begins the learning process of spoken language of the major community in the country that is the Spanish as a second language, this second language it is learned by writing and reading.

According to the above, it is important to mention that a very high percentage of deaf children are born from hearing parents who do not know sign language and thus access to the first language of this population in most cases is belatedly and in different spaces from home; school becomes the social space in which a deaf boy or girl acquires the first language from spontaneous social interactions and planned educational activities with the target language to communicate and represent the world around him/her.

This family situation makes that in the home context the ties of affection, acceptance and game are not strengthened; thus are generated in deaf children a number of difficulties related to their social links such as:

- Difficulties in cognitive development in deaf children because of the inability to communicate and develop language in the immediate environment (home), it generates long-term delays in the development of thought.
- Difficulties to get closer to the family environment due to the lack of access to the spoken language.

Traditionally, the literacy process has been understood as the encoding and decoding of texts, it means a literate person is who could read and write letters and signs, however this view has changed and now literacy is considered an ongoing process that begins when the individual begins to relate to written culture and then with its experience with reading and writing.

Starting from this perspective a literate subject is considered who understands the world around making use of reading and writing in an everyday environment, therefore alphabetize a deaf child is a social process that will enter into their lives through the interaction and the meaningful and interesting experiences, development will depend on the variety and quality of experiences in the culture of the written language in which the child is immersed.

## Reading in Deaf Children

Learning how to read is one of the most complex tasks that deaf children have to face, because it does not have a greater relevance nor relationship to the everyday or the language they use as a natural way to communicate, in most cases this process is slow, laborious and traumatic.

This statement shows that it is important to start studies in reading processes generating practices confronted with the teaching methods proposed for children at school age daily. It is clear that so far there is no any proven method and unique, which can demonstrate the overall effectiveness in the teaching of reading in deaf children with; reading in this population is not a sound decoding process, but a process in which the subject with a series of previous experiences reconstructs a sense of the text and incorporates it to the immediate reality.

Some deaf children can learn the code of the written message if they have a good foundation of language, it means if there is a language development from their first language (sign language), deaf people use codes for storing linguistic information and for this they use a visual access way.

To allow this access various strategies are utilized, they constitute equivalent access channels to the phonology of words such the settings, position and hand movements in the case of using sign language, considering that sign language is used to facilitate the access to the lexicon in deaf children (Flores, 2010, p. 3).

Based on the above, this intervention will prioritize the access to the text from the use of sign language and later through other communication media, so that students can achieve a level of understanding of what is written. Later the logographic strategies will be developed, they are based on visual analysis of the words and their relationship with a drawing and a sign.

## Writing in Deaf Children

Taking up the research of Dr. Emilia Ferreiro who says that “scribbles made by a child express the attempt to organize the spelling in a straight line”; you can see the possibility of stating that the construction of the writing system in deaf children pass through significant stages that reflect the attempt to capture in writing their thoughts, it can be evidenced when they create stories from drawings made and later when they asked what it says there, they can tell it in sign language.

As in hearing children, deaf children in the initial stage, it means cycle 1, pass through the stages of maturation of the graphs proposed by (Ferreiro, 1991) as follows:

- Scratches: strokes are made on the sheet that the child used to write or draw in most cases are crude and directionless.
- Scribbles: graphics are semi-structured, they look like *snakes* with whom the deaf children assimilates the continuous web of the letter globally perceived in texts.
- The pseudo-letters: structured graphics with similar traits to letters.
- The Letters: Conventional spellings used in Spanish.

This proposed intervention will take into account the stages mentioned above and shall be carried out based on the constructivist model for the construction of written language proposed by Ferreiro and Teberosky (1981), activities in which it is suggested to make use of writing in small workgroups with everyday issues, they will be generated from interests of children and the project-based proposal in the classroom, the designed writing situations in the classroom will have the following characteristics:

- They will read and write texts about real events (everyday actions).
- Direct teaching of letters, words or sentences out of context should be avoided.
- Sentences will be meaningful and related to the classroom project.
- Peer cooperation will be permitted.

### **Working Strategy Proposal for Teaching Spanish as a Second Language to Deaf Children of Cycle 1 in Formal Education**

The proposed intervention aims to work the development of Spanish as a Second Language in deaf students of cycle 1, designing and running a classroom project, which generates in children some communicative needs to use their first and second language, from significant experiences arises the need to speak, read or write something to share what has been learned.

To motivate students in reading and writing words in a second language, it is necessary to plan a series of intentional activities that allow the deaf children to conceptualize in their first language and then read and write what he/she has seen; either making a drawing, a sequence of images or by using words, these possibilities begin to make sense after a lived experience.

This, will resume in the launch of a didactic development of Spanish as a Second Language in the context of pedagogy for Classroom Projects, it is characterized because allows children living their First Language Acquisition Process naturally, spontaneously; and the development of the Second Language as a process of constructing meaning a



from prior knowledge and internalized through interactions with their deaf peers, it is feasible to incorporate new written information and integrate it to what they have already learned.

The didactic proposal allows getting a contextualized reading and writing learning, since it is linked to the reality, experiences, everyday experiences with social norms that regulate reading and writing: the everyday life at school, making notes from the board, the development of working guides, registering in notebooks, among other school activities.

A classroom project favors meaningful learning and school becomes an interesting place to which anybody should go to learn new things. Consequently reading and writing activities are not mandatory but become social, cultural and historical activities. This approach is supported by the postulates of Vygotsky; who she says: "It is a process of social exchange and other literate subjects: communicative exchanges with others and with the environment cause obtaining information related to learning" (Vygotsky, 1979, p. 88).

In conclusion, the proposed strategies for this intervention are framed in the ideas of Ferreiro and Teberosky authors, recognizing as teachers that deaf children of cycle 1, have some previous knowledge created from their experiences in and out of school, they say "[...] to do activities of reading and writing in real contexts, to meet real needs and in order to develop communicative competence in children" (Teberosky, 1993, p. 173).

## Results and Evaluation of the Proposal

Project - based activities in the classroom open the possibility of practicing everyday language that children need in the real world, under this premise, the intervention work done with deaf children in cycle 1 at Federico Garcia Lorca School, allowed demonstrating achievements and difficulties; in this analysis of the population involved basically the most important aspects related to the progress and difficulties identified in the process of implementation of the methodology will be stated.

To begin the analysis of important results for this intervention are considered the achievements of the population involved, among the highlights must be spelled out:

- All learnings from the project arose from the daily interaction being children, they and their teachers with linguistic patterns, with parents and the community in general.
- It was evident in deaf students their awareness of the daily use of the written language.
- The written language gained an important value for children, because they understood it is a vehicle to communicate.

- Children were able to establish the relationship between the specific object and the written word.
- They achieved confidence in the use of the first language and the use of the second language in its written form.
- The project helped to establish oral communication (Colombian Sign Language) among participants.
- The development of imagination was prioritized at the time of narrating situations and translate them in a written form.
- The word recognition was achieved in some cases taking account those short and frequently used words in the proposed activities.

As it was mentioned above, in the launch of the project some difficulties were also evident, as the ones below:

- Deaf students who got half of the process, difficulties were evident to engage the pace of the working group.
- Lack of family support was evident, basically in the execution of those tasks left as reinforcement at home
- Miscommunication at home for activity guiding and feedback from work developed at school.
- Lack of access to other information sources, for example television programs for children.
- Unlike hearing children acquire language naturally and spontaneously, the performance in deaf children is slow, laborious and in some cases unsatisfactory.
- Deaf children have difficulty acquiring knowledge regarding the syntax of written language.

## Findings

After the intervention, deaf children of cycle 1 have a repertoire of expressions in his first language enough to narrate experiences details and daily activities, some activities were carried out at home but less detailed, due to poor feedback at home from the family, this allows to conclude that the oral process has not been developed in the family context prior to the schooling process, it has been carried out in the classroom.

Given the characteristics of the group of deaf children in cycle 1, who the intervention development was done with, it can be concluded that the first stage of oral literacy is developed in the school context.

First experiences of language in any child are built in a spontaneous and natural way inside home, however deaf children cannot do it naturally due to their family ignorance about Sign Language. That oral experience that predates the schooling process is very significant for the infant because it enables the expression of his/her thought and the construction of everyday knowledge (Berger, 1994).

The process of reading with deaf children of cycle 1 occurred spontaneously, texts of interest to children who retained relationship with classroom project were identified.

The reading was done in Colombian sign language, making full use of their own narrative elements of language and characterization of some characters when necessary to ensure understanding. The process was conducted in several class sessions to repeat the story because important details are added to understand and memorize it.

When making the reading of the images it was given a sign to each character in the story to identify it, later in the round of questions it was easier to identify.

The most significant findings in the reading process were: at the end of the school year, deaf children of cycle 1 perform image reading, in which comprehension situations are evident. Recognize some short words from the environment by length and frequency (every day and project-based work in the classroom).

As for the writing process, deaf children in cycle 1 recognize that there is a form of writing that identifies the farm animals and their characteristics, write stories (drawings sequences) that the teacher narrates in sign language and enjoyment of recreational reading moments in which the teacher accompanies reading with images, videos and a film is evident.

Through role play, memorization of events and dialogues of the characters in the story were achieved.

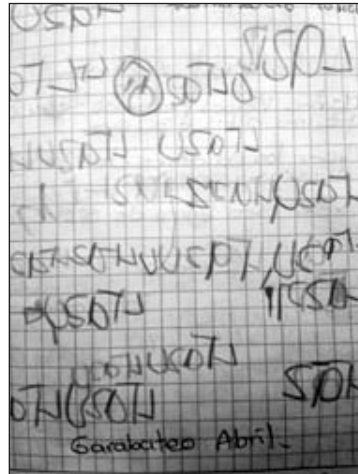
Initial writing processes in deaf children were satisfactory and managed to show development and progress according to their age and grade in which they are, it was evident throughout the entire school year a great advance on issues related to initial readiness for writing, clamp configuration to catch the pencil, line management and spatial awareness for the graphemes strokes.

It is important to mention that every child has a different pace of learning and development of fine motor skills, so progress in all students were not homogeneous.

According to the statements of (Ferreiro, 1991), children go through stages or levels of development in your writing process like this:

Level 1 – deaf children went through this level when reproducing some traits that constitute forms of writing.

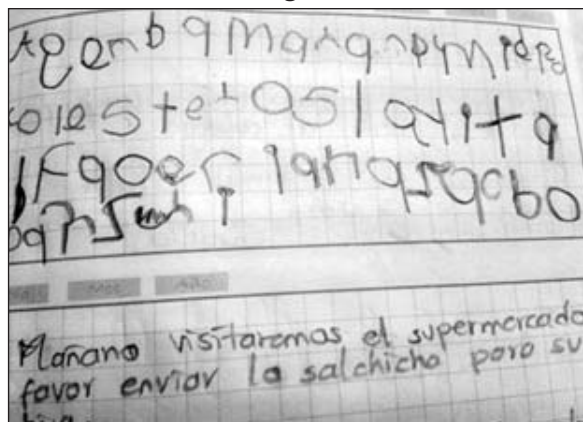
**Figure 1**



Source: Cycle 1 student's notebook, April 2014.

Level 2 – children use as many graphs and are more similar to the letters, deaf student understands writing as a whole representing some information.

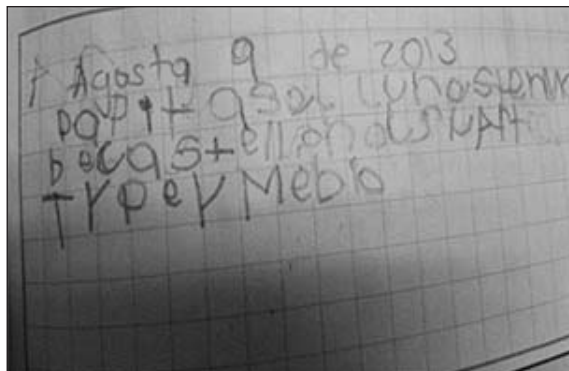
**Figure 2**



Source: Cycle 1 student's handbook, May 2014.

Level 3 – At this level the syllabic hypothesis arises in children, deaf children already have the ability to produce graphs similar to those letters. At this stage, deaf children begin to give a dacti-lologic relationship between the shape of the letter and the written representation in their notebooks, board or books they are watching.

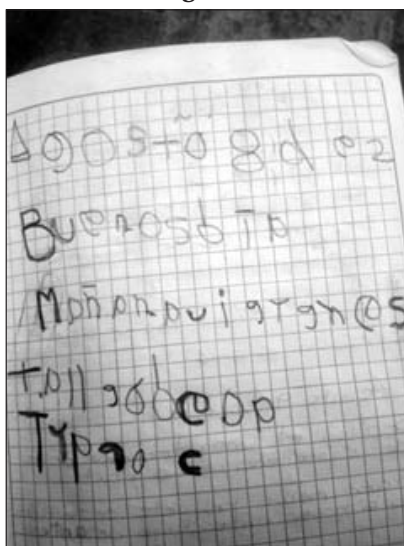
Figure 3



Source: Cycle 1 student's handbook, August 2014.

Level 4 – Deaf children of cycle 1 reach a level transition from the previous syllabic hypothesis, gradually begin to discover the relationship between grapheme and fingerspelling alphabet (phonemes), it is evident that are already able to write and recognize fixed forms for example: name and dates.

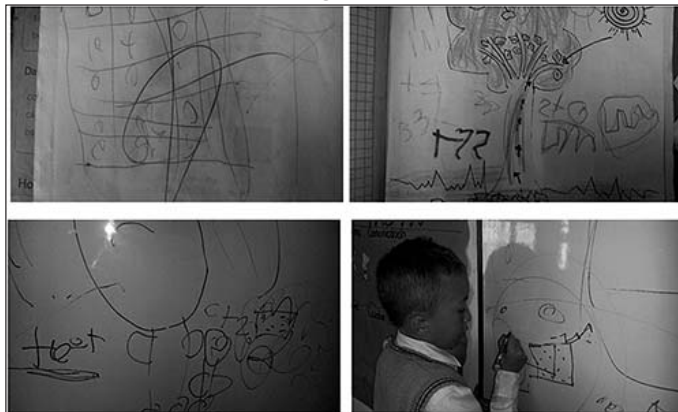
Figure 4



Source: Cycle 1 student's handbook, August 2014.

## Level 1: concrete level or presymbolic

Figure 5

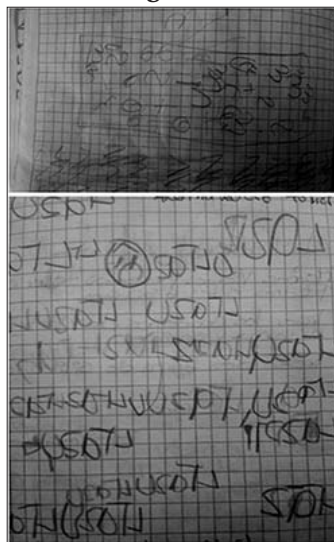


Source: spontaneous writings on board classroom, May 2014.

- At this stage, children do not know that writing carries meaning.
- There is no discrimination between writing and drawing.
- Children read images.
- They can recognize some letters but in that moment they do not carry meaning.

## Level 2: symbolic level

Figure 6

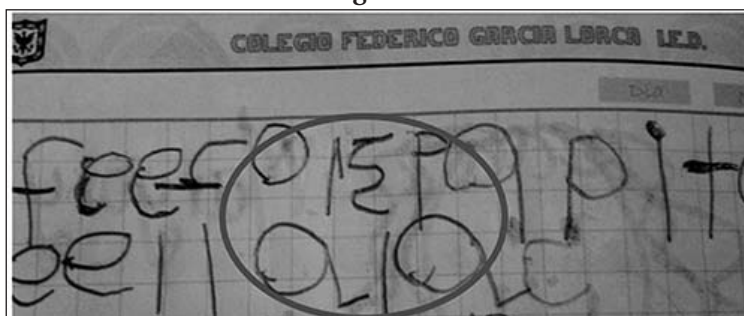


Source: Cycle 1 student's handbook, April 2014.

- At this stage children begin to identify that written texts are carriers of information.
- When writing they do spellings like balls, sticks, curves, strokes with just one graphic.

## Quantity Hypothesis

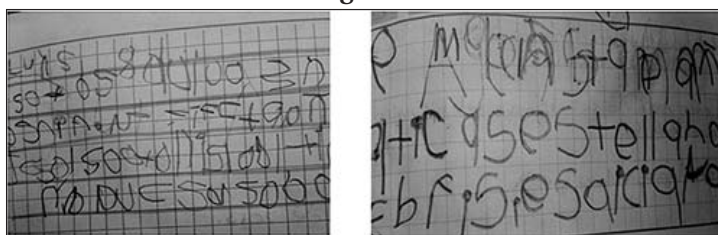
Figure 7



Source: Cycle 1 student's handbook, February 2014.

## Name Hypothesis

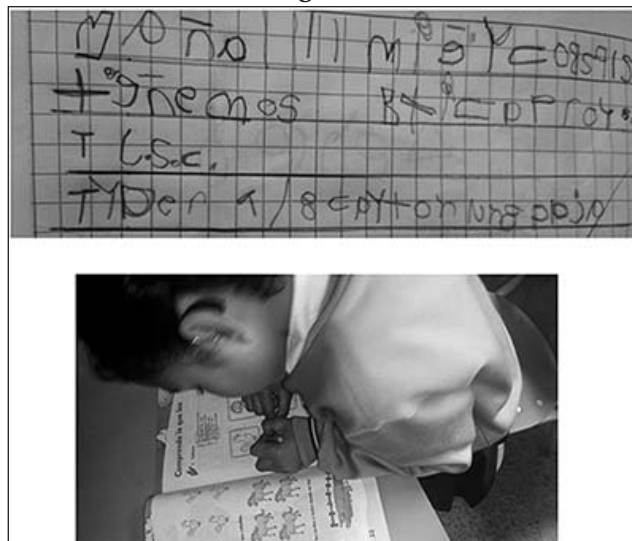
Figure 8



Source: Cycle 1 student's handbook, May 2014.

## Variety Hypothesis

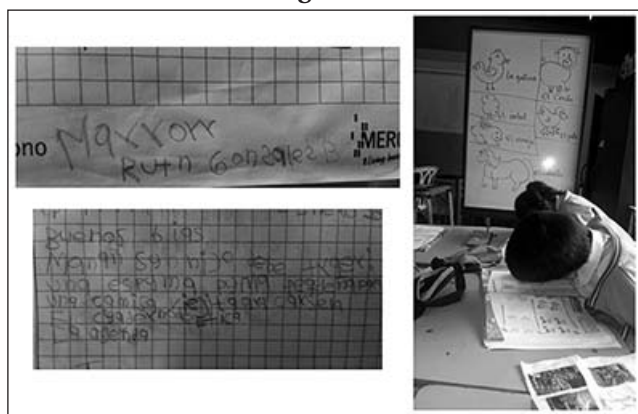
Figure 9



Source: Cycle 1 deaf student's notebook and book, May 2014.

## Level 3: linguistic level

Figure 10



Source: cycle 1, deaf students' notebooks and books, classroom picture.

- At this stage deaf students understand the relationship between graphs and fingerspelling.
- They are able to identify the letters of their names.



## Conclusions

The process of acquiring a second language in children with hearing impaired have been and will be studied and analyzed by teachers who work with this population, due to their importance throughout the academic and personal development as human beings.

If the approach of deaf children to a second language at an early stage, it means in the first cycle of formal education, is developed successfully, it will allow the full development of communication and social skills of the deaf subject, so that they can establish themselves as bridges between the hearing culture and the culture of deaf people, allowing that linguistic community transcend and advance for the pursuit of academic, scientific and technological knowledge that are written in Spanish.

Based on the above, this work of educational intervention in the classroom is not intended to be generalized to the entire population with hearing impairment in the country, but allows a pedagogical reflection that brings valuable pedagogical and didactic elements, designed to encourage the teaching of Spanish reading and writing as a second language in deaf children of cycle 1 in formal education.

This document describes the analysis of the results of educational intervention carried out during the school year 2014, which sought from the implementation of a classroom project; elucidate relevant teaching strategies to address the teaching of written Spanish as a second language in deaf children from cycle 1 in formal Education.

The whole process started from the approach of latent problems in formal education institutions that support people with hearing impairment; the theoretical approach of the intervention was subsequently based on the conceptual contributions recognized in the teaching of reading and writing authors and contributions of the regulatory rules in Colombia on education. Based on the theoretical and contrasting with the findings of the classroom throughout the intervention period basis it can be concluded that:

- The teaching of reading and writing in the deaf children should be assumed from a social communicative perspective, where the same student find meaning and usefulness to everything he/she has learned in the classroom.
- Project-based pedagogy for classrooms is a viable strategy to promote the learning of Spanish as a second language in deaf children from cycle I in Formal education.
- It was determined that deaf children in their preschool stage reach the levels of writing development proposed by (Ferreiro, 1991).
- Another conclusion is that reading and writing must not be taught to deaf children as a mechanical processes encoding and decoding a code other than their first language.

- Given the linguistic conditions of the deaf children when they go to school, it is necessary the teacher to work as a mediator in the initial literacy process, being able to accept and respect the individualities of each student.
- We concluded that early exposure to learn sign language in deaf children provides students with a foundation of language for the development of reading and writing skills in a second language.
- Undoubtedly family support is crucial to achieve good results in the reading and writing teaching in deaf children.

It is important to highlight that all students participating in the implementation and development process of this educational intervention, significantly improved their performance in the literacy processes, reading and writing; it means deaf children reached an adequate management of basic literacy to start learning and developing a formal written code, according to the levels of their elementary education.

With the teaching strategy implemented in this educational intervention, it was determined to develop processes of reading and writing in playful and collaborative environments, it produces in students outstanding results, as activates processes of autonomy, promotes socialization and participation on an equal footing, due to all the work based on their interests and needs, which will work throughout the classroom development project.

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