Formation of Skills Prior to the Acquisition of Basic Grammar Categories

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Authors' contributions

This work was carried out in collaboration between all authors. Author YS designed the study, wrote the protocol and supervised the work. Authors DR and EL carried out all laboratories work and performed the statistical analysis. Author LQ managed the analyses of the study. Authors DR and YS wrote the first draft of the manuscript. Author YS managed the literature searches and edited the manuscript. All authors read and approved the final manuscript.

ABSTRACT

Acquisition of grammar is a topic of discussion within educational system. Pupils at school show strong difficulties in independent writing production, which depends, among other things, on general knowledge of basics of grammar. No original strategies or innovation methods are proposed in traditional education. Our study represents an effort to show a new pedagogical approach to teaching initial grammar categories. The aim of the study was to obtain qualitative pedagogical data during the work with basic grammatical categories through prior acquisition of certain skills of orientation and reflective comprehension of differences between essential characteristics of each type of word (basic grammar category). The study was carried out with Mexican regular pupils of second grade of primary school. We discuss effectiveness of positive results, which were obtained by application of new pedagogical experience. Our proposal is based on strategies of guided orientation according to cultural historical psychology and activity theory.

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1. INTRODUCTION

In Mexico, as in many other Latin American countries, acquisition of grammar categories is a problem in primary school [1]. Children frequently have strong difficulties and show poor motivation during this process. Such situation is reflected in low levels of reading and writing abilities at the end of primary school. According to official statistics of Secretariat of Education en Mexico, among other difficulties, the level of comprehension of texts is extremely low [2,3], as well as level of independent production of written texts. There are no concrete pedagogical proposals for resolving these problems from official educational institutions. The motivation of Mexican school children for theoretical acquisition of written language and for reading in general is poor.

Psychological theory of historic and cultural development of human psyche [4] may be used as methodological background for alternative consideration of learning process. Such methodology differs from traditional teaching based on memorization of knowledge, repetition and reproductive activities. Psychological activity theory understands the learning as an active process. This process includes directed and joint activity between teacher and pupils. The direction of the learning process may be achieved by using specific orientation. Such orientation includes introduction of general concepts for each area of knowledge. That means that the whole process of knowledge acquisition is taken into account as organized activity in opposition to traditional way of introduction of knowledge just according to established official program [5].

Strategies and ways for guided formation of concepts in primary school were shown in activity theory applied to teaching process [6,7,8,9,10]. According to activity theory applied to organization of learning process, introduction of each type of concept has to be fulfilled on the basis of previous orientation of school children. Such orientation requires special organization of learning activity divided between teacher and pupils [10,11,12,13].

Considering the difficulties observed in primary school in Mexico related to traditional teaching of grammar, it is possible to propose new kind of guided programs adapted to features of grammar, lexical and morphological structure of Spanish language. In our research, which is founded on activity theory applied to teaching, we propose an alternative way of teaching grammar. Our program is aimed at training and assimilation of general grammar categories at initial steps of education in primary school.

The aim of our study was to obtain qualitative pedagogical data during the work with basic grammatical categories through prior acquisition of certain skills of orientation and reflective comprehension of differences between essential features of each type of word (each grammar category). Methodology of experiment of formation of concepts and actions, firstly proposed by Vygotsky [14] and developed by Galperin [15,16] was applied in the study. The way of formation was based on the theory of interiorization starting from external level of orientation and gradually passing to most independent execution of intellectual actions [7,10,16,17]. The stages for formation of intellectual actions by steps used in our study were symbolic materialized level, level of perceptual actions and verbal oral and written speech [18]. All kinds of pedagogical activities applied in the study were based on proposal of cooperation between adult and child according to the conception of the zone of proximate development [19].

According to proposal of this author, new intellectual actions are more significant for conceptual and intellectual development in comparison with old traditional and easy actions and concepts [19]. Working inside the zone of proximate development means gradually introducing new actions and concepts [20]. Such conception contradicts completely the traditional way of teaching based on constant repetition of rules and formal concepts and its memorization.

The main purpose of our study is to offer specific kinds of new intellectual actions, which may guarantee formation of initial general grammar concepts. Our central interest was focused on the possibility of showing new way of reflective and guided teaching and learning as parts of the unique process. The general concepts used during formation were introduced as shared collective actions within situations of dialogues. Discussions in groups and common solution of

the problems proposed in school sessions were essential parts of our program. Specific guided orientation provided by teacher was the main methodological instrument of our study. The significance of our study is related to creation of new pedagogical programs, which may help to improve the level of current education of grammar in primary school. Our research is new and unprecedented in Mexico.

2. METHODS

The study is qualitative, descriptive and exploratory and includes proposal of innovative teaching program, which could facilitate the acquisition of basic Spanish grammar categories. Children from the second grade of primary school (the city of Puebla, central Mexico) were included in the study. The children were pupils of a small private school were new innovative programs for teaching and learning are being created according to main proposals of historical and cultural psychology and activity theories. Such type of organization of educational works at this school has permitted to carry out our study. The psychological age of the children who participated in this research is school age. The sample was composed of 4 pupils of 7.25 years of chronological age on average, three boys and one girl (Fig. 1).

The criteria considered for inclusion of children in the study are presented in (Table 1).

The research was conducted in a classroom within the Kepler College, which has all the necessary structure and infrastructure and is located in the center of the city of Puebla (Fig. 2).

Fig. 1. Children who took part in the research
Table 1. Criteria for inclusion of the children in the study

Criteria for inclusion N = 4	Criteria for exclusion of analysis of data N = 0	Criteria for exclusion N = 0
Children who were in the second grade of the selected school, and living in the city of Puebla.	Children who had a history of neurological and/or psychiatric disorders, and children who attended regularization classes.	Children who missed at least 5 sessions during the course.

The College were our program was applied was completely new at the time of the study, the reasons why the group of pupils was small. On the other hand, the College was organized on the basis of research work of Master Program of Neuropsychology at Psychology Faculty of Puebla Autonomous University. The work was organized as a project for post graduate student. The educational program was designed and guided by researchers in the field of educational neuropsychology and historical and cultural psychology [20,21].

Special method for discrimination and differentiation of essential features (semantic, grammatical and morphological) of Spanish categories and for gradual acquisition of grammatical categories by stages was created [20]. The program is based on historic and cultural paradigm of psychological development [14] and on the theory of gradual formation of mental actions proposed by Galperin [11]. The introduction of the new actions and concepts takes place through joint activities applied Talizina [13]. Such kind of approach permeates the organization of the assimilation of scientific concepts from general category to particular manifestation of each level [6]. In case of acquisition of grammar, we divided the program in two essential parts: 1) introduction of prior general skill which could be called as meta-linguistic skills and 2) gradual teaching of grammar categories relevant to Spanish language [20].

Fig. 2. Kepler college

According to our proposal, the first part of the program included following goals and activities:

1) Formation of reflected sensibility for identification of words as independent units within the sentence;
2) Identification of meaning of each word within the sentence (concrete object, abstract object or process; actions; characteristic of object; characteristic of action or absence of any kind of specific meaning);
3) Classification of the words in 2 groups: words with independent meaning and words with auxiliary meaning;
4) Elaboration of sentences with different types of words according to their semantic meaning;
5) Comparison of sentences from the point of view of semantic meaning.
6) Introduction of general concept of "sentence" as oral expression which includes 2 aspects: about what we say (subject) and what we say (predicate);
7) Introduction and assimilation of general characteristics of a concept "grammar category" or a "class of a word" (semantic, grammar and morphological levels).

The second part of the program included elaborated orientation for all types of grammar categories (classes of the words) used in Spanish language. Such classes of the words are: noun, adjective, pronoun, verb, adverb and article. At this level of learning program, specification and particularization of concrete types within each class of the word were not among the aims. Other kinds of grammar

categories or classes of words (preposition, conjunction, gerund number) were not included at this level.

All activities were guided and organized as common divided tasks in classroom according to the concept of the zone of proximate development within historical and cultural paradigm of learning [22]. The qualitative pedagogical assessment of skills for the usage of grammar categories was applied before and after our program according to activity theory methodology [10,23].

The educational program was applied during a school year period, with three one-hour sessions per week. Therefore, we applied two assessments, at the beginning and at the end of the program application. The goal of such assessment was to evaluate the level of formation of grammatical categories before and after working with our teaching program. Methodology of our research was employed as qualitative exploratory study with comparison according to the following design:

$$\text{GE: R } O_1 \quad X \quad O_2$$

Where GE = experimental group O (1-2) with the test measurements (pre and post), and X = the program of training. The instrument used for initial test and post-test was designed according to proposals for psychological and neuropsychological assessment of school success with additional tasks for assessing the acquisition of grammatical concepts [24].
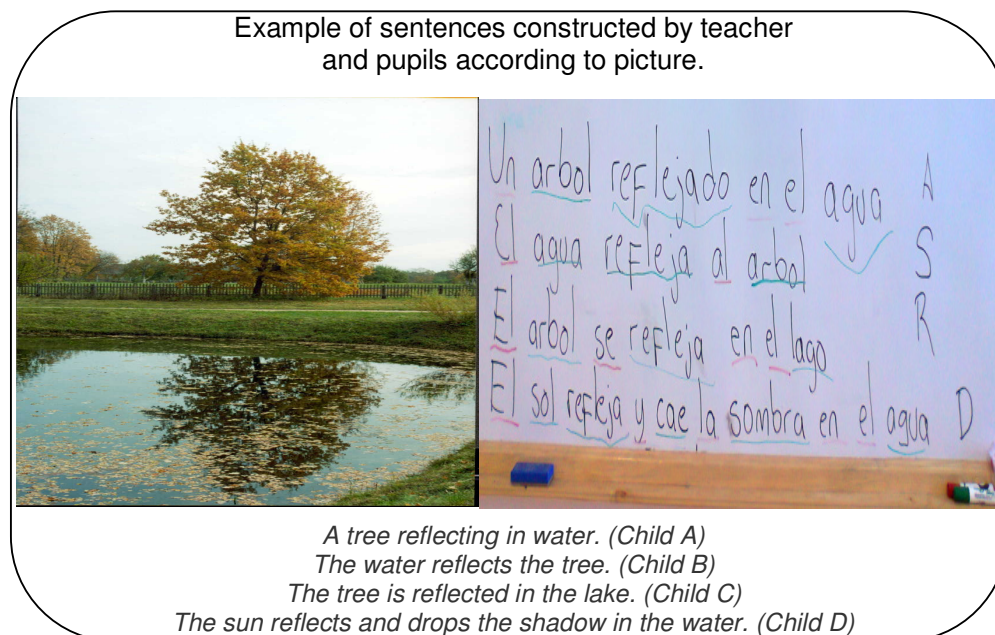
2.1 Pedagogical Procedure

The content of all items of the program was introduced and worked with the help of orientation provided by an adult. The whole process of teaching was organized as process of constant mutual cooperation based on common actions and dialogues between pupils and teacher. The orientation was elaborated with the help of specific cards, which were created together with the children in educational sessions [5,10,21,25]. All essential features of introduced new grammar concepts were presented on the cards. The cards were called "orientation cards" according to Talizina's previous works. In these previous works such cards were used not for grammar but other school matters [13,26]. The children were able to use orientation cards during all of activities in the classroom and at home. The teacher was showing and explaining how to use each card for all tasks in the classroom.

The activities were divided into two stages. Each stage consisted of four months' work within the classroom 3 times per week during common school session for learning of Spanish language.

2.1.1 Part 1. prior skills for acquisition of grammar categories

Firstly, the work was aimed at acquisition of prior skills to assimilation of most general grammar categories. Specific tasks were proposed in order to work with identifying the quantity and sense of words as separate units in sentences. All words were divided in two general groups: 1) words with independent meaning and auxiliary words (e.g. "boy", "red", "walk", "beautiful" and so on) and 2) words without any independent meaning (e.g. "it", "a", "and"; "on" and so on). The children had to compare words by their meaning and to determine the group for each word (group 1 or group 2). The words were presented also within different sentences. The sentences were constructed initially by teacher and/or by pupils according to pictures, illustrations, common situations and activities (Fig. 3). Gradually, children became more independent and were able to construct their own sentences. The teaching tasks were fulfilled within divided activities organized by teacher with the participation of the whole classroom.

Example of sentences constructed by teacher and pupils according to picture.

A tree reflecting in water. (Child A)
The water reflects the tree. (Child B)
The tree is reflected in the lake. (Child C)
The sun reflects and drops the shadow in the water. (Child D)

Fig. 3. Children had to mark with green color the words with independent meaning and with red color the word without any independent meaning within different sentences
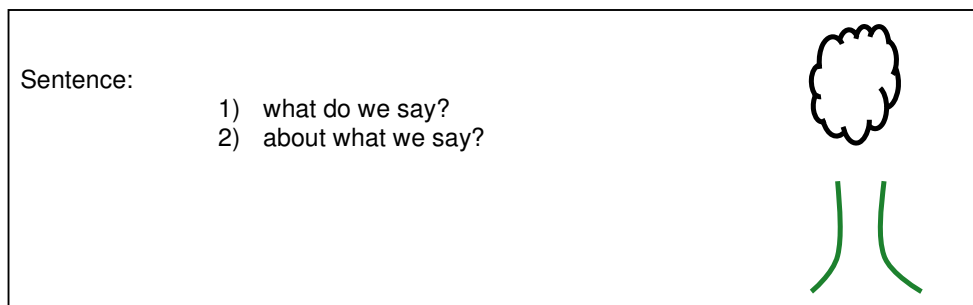
During fulfillment of the tasks, the children had to comment about semantic meaning of all the words within created sentences, identifying all elements of the sentence. Such elements included objects, characteristics of objects, features of actions, actions, and numbers for the first grammar category of words (words with independent meaning). The words of the second category (auxiliary words or functional words) were presented also as necessary elements of the sentence. The children observed that such words help to connect (relate) different kinds of words in the sentence.

Next, general characteristics of the concept "sentence" was introduced (Fig. 4). The concept of sentence was explained as an oral or written expression, which included 2 essential parts: 1) what we say (predicate) and about what we say this (subject). In order to facilitate symbolic representation and comprehension of this concept, the symbol of "tree" was used with 2 elements: 1) "trunk of the tree" as symbolic representation of "what we say" (predicate) and "foliage of the tree" as symbolic representation of "about what we say" (subject). The formal terms of "predicate" and "subject" were not used at this initial stage. Our objective was only to guarantee the general logic comprehension of the concept of sentence in our pupils.
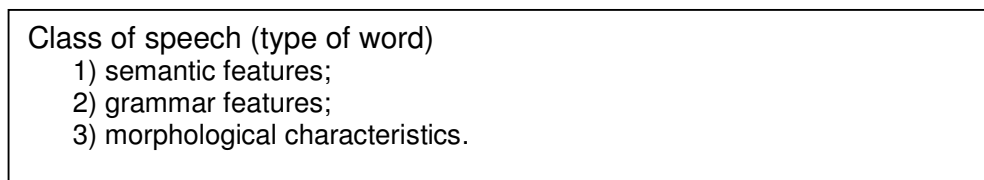
Afterwards, general characteristics of the concept "grammar category" were introduced

with all conceptual essential features and reflected in orientation card after explanation and presentation to the children (Fig. 5). As essential features of grammar categories three aspects were established: semantic, grammar and morphological feature [23]. Semantic feature means that the word always refers to something and two options are possible: independent meaning in case of noun, verb, adjective and so on, and absence of independent meaning in case of articles, prepositions and son on (functional categories). Grammar feature means that the word may have specific way of "behavior". For example, the words may be changed by number, person, time, aspect and so on. Such changes may vary from language to language, but their presence is general in all languages. For example, the usage of flexion "s" for plural number is general both in Spanish and English and so on. In the case of Spanish, large variety of morphological changes may be observed in different grammar categories. We believe that it is impossible and useless to study and to remember all of them at the stage of grammar introduction.

While working with the orientation card, children had to find (propose, elicit or read) any word and then to describe semantic and grammar features and to notice the presence of morphological features in each word. We stress that at this stage this work was of general order without all possible kinds of grammar details.

Sentence:
     1) what do we say?
     2) about what we say?

Fig. 4. Orientation card for concept "sentence"

Class of speech (type of word)
    1) semantic features;
    2) grammar features;
    3) morphological characteristics.

Fig. 5. Orientation card for concept "grammar category"

2.2.2 Part 2. classes of words or basic grammar categories

After such prior training of general grammar skills (possibility of comprehension of semantic and functional categories of words), the gradual teaching and introduction of basic grammar categories (noun, adjective, pronoun, verb, adverb and article) was organized. Semantic, grammar and morphological characteristics were introduced by teacher for each class of word.At this stage children were able to produce their own sentences in an independent way and comment about respective components and sense of sentences. Reading and independent production of sentences and accessible texts was essential part of the program. As home tasks, children had to read texts and stories and to identify studied grammar categories with the help of orientation cards. Difficulties and success at home were always revised and commented in classroom among the group.

2.3 Description of Pedagogical Process

Teaching process carried out according to created program showed positive participation of the children in the program. During all sessions, the children were happy to be able to understand and complete the proposed activities together with their mates. Awareness and critical attitude of the pupils was reflected in possibility of common correction of minor errors in groups. Constant initiative and cooperation took place in each session. The children expressed their positive emotions while working with the teacher

according to the program. All pedagogical work according to our program was divided in three basic stages: materialized, perceptive and verbal [10,18,27]. During materialized stage external symbolic marks were used for specific work with the concepts. On perceptual stage, children drew marks by themselves. The work on verbal stage was used as the final stage, on which only written production and oral analysis of categories were worked out.

Concrete examples of activities and fulfilled tasks presented below reflect successful performance of children during implementation of the program.
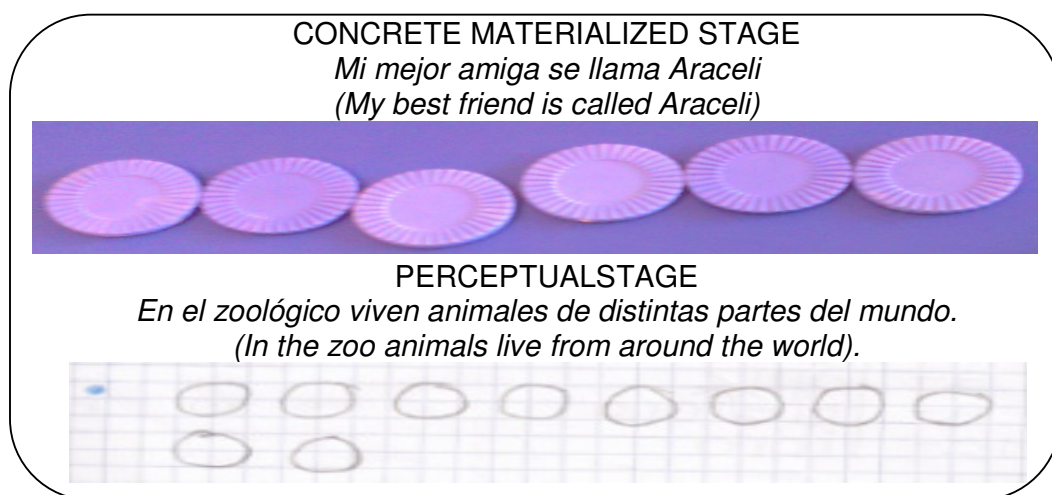
2.4 Introductory Part of Word Classes (Parts of Speech or Grammar Categories)

2.4.1 Activity 1

Identification of words in sentences with the help of external mark (plastic circle) as independent units within the sentence (Fig. 6). In this task children had to represent with external mark each independent word in different sentences.

2.4.2 Activity 2

Identification of meaning of each word within the sentences. Sentences may include different aspects: concrete objects, abstract objects or process; actions; characteristic of object; characteristics of action or absence of any kind of specific meaning for functional words (Fig. 7).

CONCRETE MATERIALIZED STAGE
Mi mejor amiga se llama Araceli
(My best friend is called Araceli)

PERCEPTUALSTAGE
En el zoológico viven animales de distintas partes del mundo.
(In the zoo animals live from around the world).

Fig. 6. Identification of each word in a sentence (number of circles corresponds to number of words in written or oral statement in Spanish)
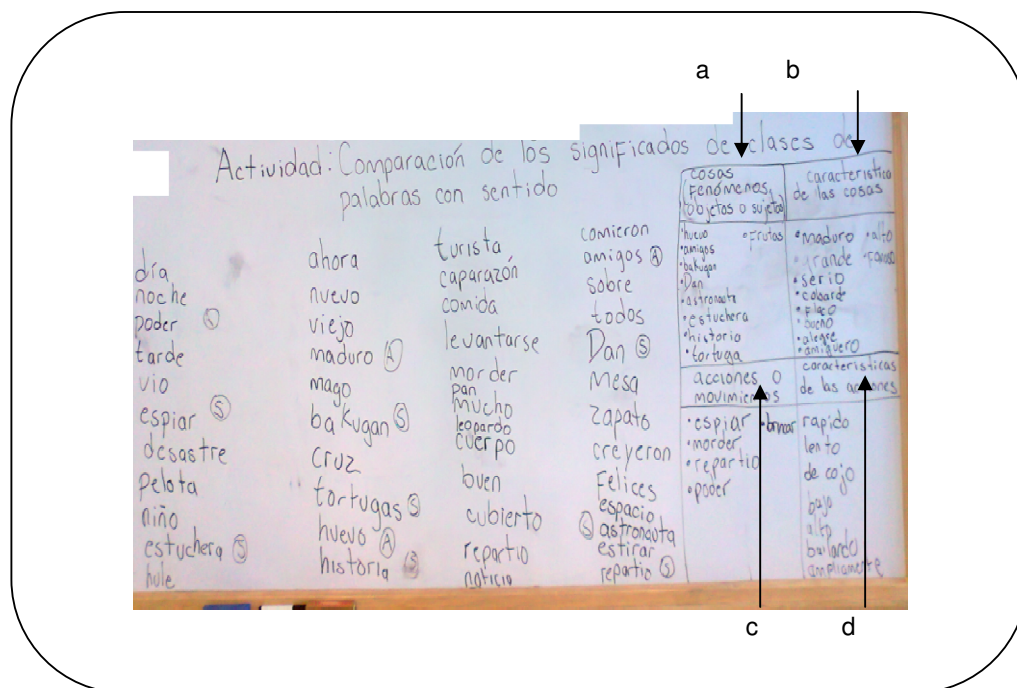
Fig. 7. Identification of meaning of words. Objects (a). Characteristics of objects (b). Actions (c). Characteristics of actions (d)

2.4.3 Activity 3

Classification of all words in 2 groups: words with independent meaning and words with auxiliary (functional) meaning (Fig. 8).

2.4.4 Activity 4

Elaboration of sentences with different types of words (Fig. 9).

2.4.5 Activity 5

Comparison of sentences by quantity of two categories of words (with and without independent meaning) used for each sentence.

2.4.6 Activity 6

Introduction of general concept of "sentence" as oral expression which includes 2 aspects: about what we say (subject) and what we say (predicate) (Fig. 10).

2.4.7 Activity 7

Introduction and assimilation of general characteristics of a concept "grammar category" or a "class of a word" working with semantic meaning (Fig. 10), grammar changes (Figs. 11 and 13) and morphological aspects (Fig. 12).

3. RESULTS OF PRE-TEST

During initial assessment children had difficulties in making sentences. They were not able to identify any type of words, were not aware of the changes of words neither of mistakes and were not abler to write any sentence by themselves (Fig. 14). In general, they were not aware of grammar categories of Spanish language. Our examples present mistakes in assessment according to Spanish grammar for production of sentences.

4. RESULTS OF POS-TEST

During the final assessment after conclusion of the work according to our program, in comparison with the initial evaluation, children showed better production of written sentences and greater linguistic creativity. Such results were reflected in the possibility of making sentences with specific types and quantity of grammar categories requested by an adult (Fig. 15).

Positive skills prior to the assimilation of grammatical categories were reflected in the
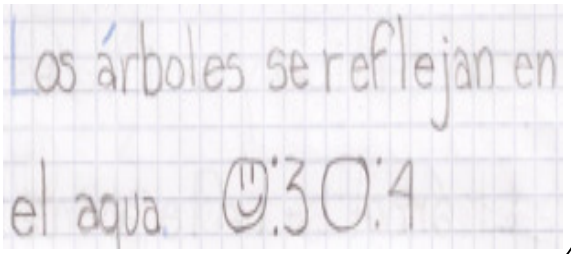
success of analysis of text (Fig. 16). In this task the children were asked to mark with different colors words in the texts. The words belonged to different grammar categories. The surprising fact is that even without any knowledge about each grammar category (type of word), children were able to notice differences in semantic, grammar and morphological features of the words. The examples of the tasks shows the children's familiarity with different kinds of words.

Fig. 8. Comparison of the meanings (functions) of words using the corresponding orientation card: auxiliary (symbol "O") and whit semantic meaning (symbol " ☺ ")
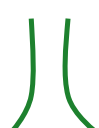

Fig. 9. Development of sentences with support scheme. Things (a). Characteristics of things (b). Actions (c). Characteristics of the actions (d)
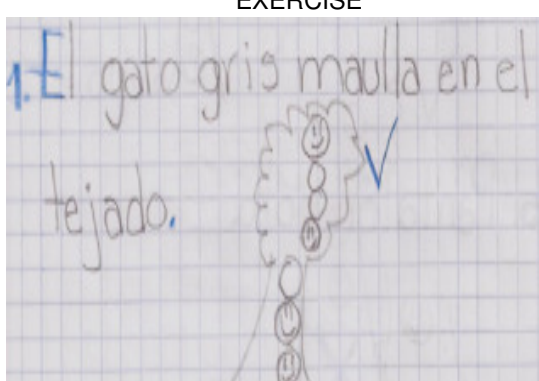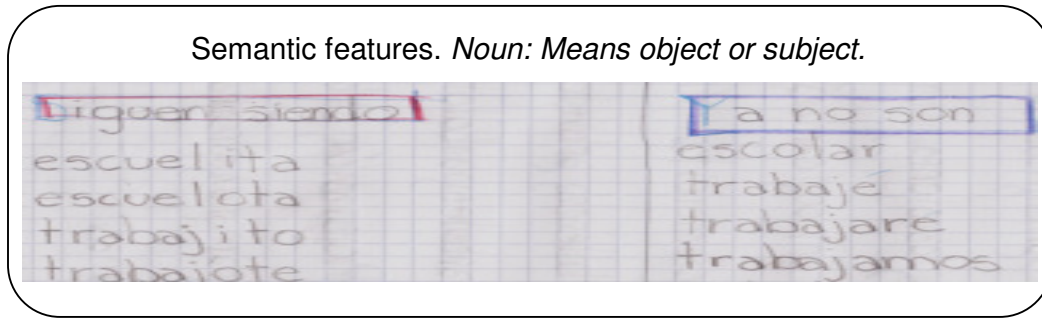

Fig. 10. Subject and predicate in the sentence

Semantic features. *Noun: Means object or subject.*

Fig. 11. Semantic features as essential features of grammar classes. Examples show grammar changes in nouns "school" and "work" (red color means subject or object (nouns in Spanish); blue color means that the word is neither the subject nor the object (verbs in Spanish)

Morphological characteristics. *Structural parts of noun.*

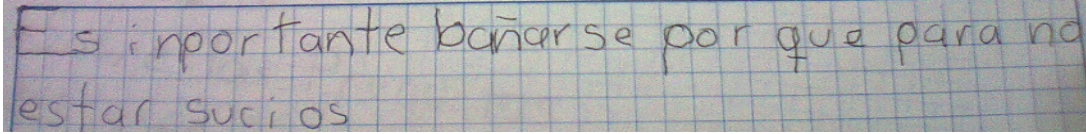*Start*   *End*

Changes of noun.
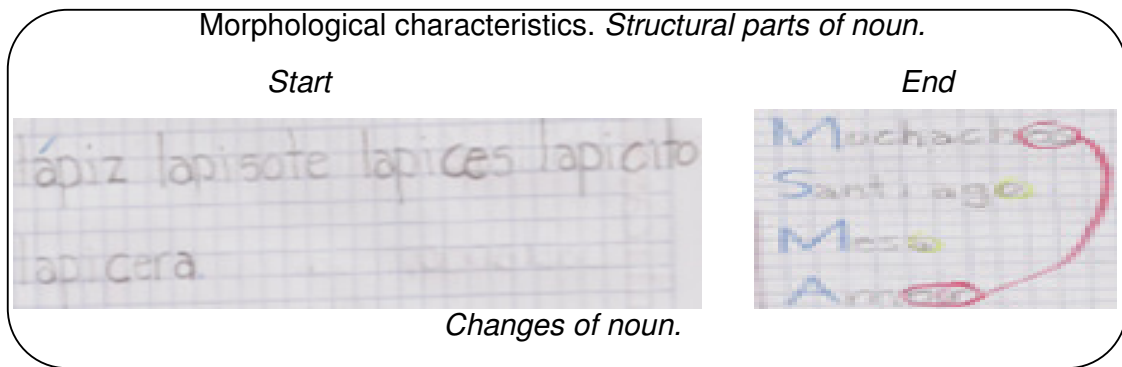
Fig. 12. Identification of the essential features in word classes. Morphological characteristics Transformations of words preserving the root morphological words (start) and identification of similar endings in different words of the same grammar (grammar endings)
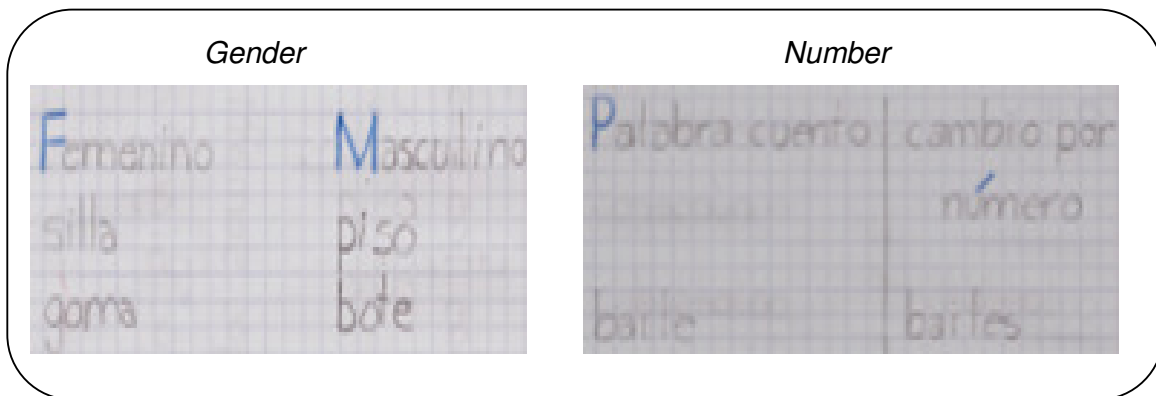
Gender   *Number*

Fig. 13. Identification of the essential features in grammar categories. Grammar features. Changes by gender and number of the nouns in Spanish
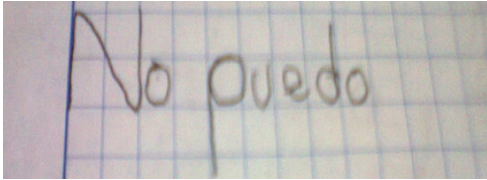
Tasks for usage of grammar
Pre-test
Example a: Write the sentence that you want.

Bathing is important because to not be dirty.

Example b: Write a sentence that has one noun, one adjective, one verb and one adverb.

I can not.

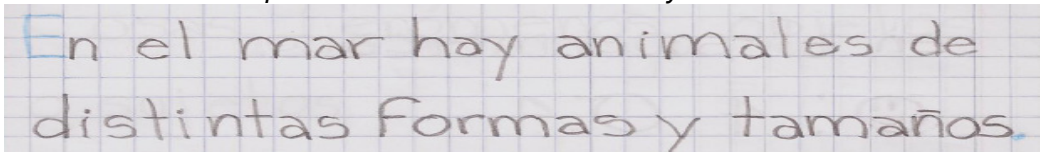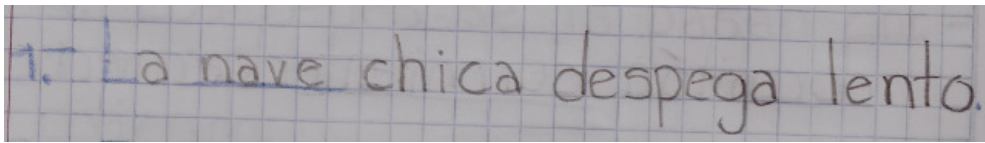**Fig. 14. Examples of initial assessment with mistakes in sentences**

Tasks for usage of grammar
Pos-test
Example a. Write the sentence that you want.

In these a there are animals of different shapes and sizes.

Example b. Write a sentence that has one noun, one adjective, one verb and one adverb.

The small airplane flies lowly.

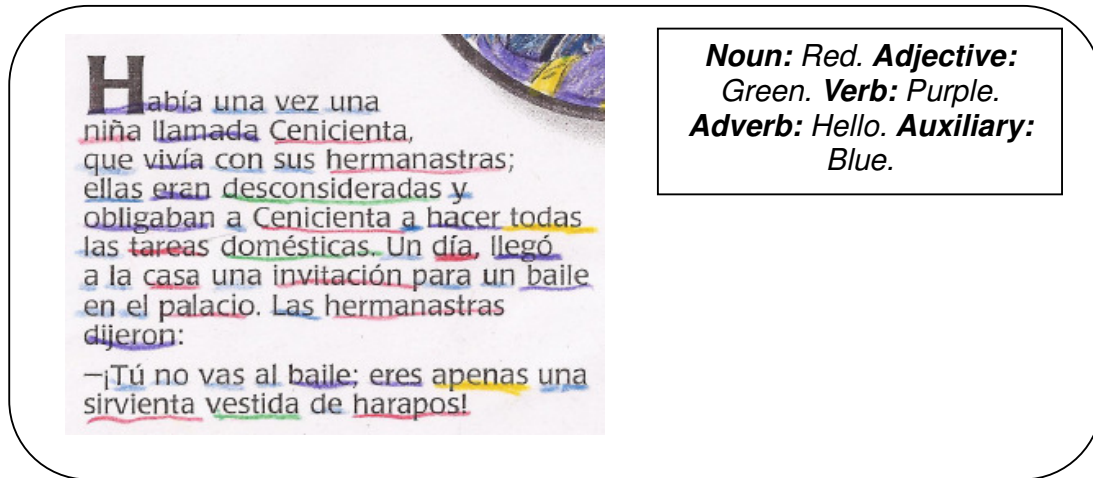**Fig. 15. Examples of final assessment with correct answers**

Fig. 16. Reading and explanatory texts

5. DISCUSSION

According to dialectical materialistic paradigm [28], our research may be considered experimental and qualitative. From the point of view of particular psychological methodology, our study is an example of experimental genetic method proposed by Vygotsky [14] for psychological studies. Later on, such studies were called as formative experiment [10]. That means that new concepts and new actions can be developed in children as a result of joint activity guided and organized in a specific way [29]. In our study initial grammar concepts, which were completely new for the participants. The initial evaluation allowed us to establish that all formed concepts were new before working with our program.

The results of final assessment have shown the possibility of formation of basic grammar skills in classroom. Our study showed positive effects of proposed program for acquisition of general linguistic skills in school children. All children were able to take part in proposed activities and showed high level of interest and positive motivation during the whole process. Pedagogical work with group of children was organized without any kind of mechanic memorization or repetition of rules. Instead of such traditional way of teaching, constant orientation was used. It is important to stress that the orientation was not only verbal, but symbolic, based on usage of external orientation cards. In our previous studies, same kind of external orientation was applied for teaching of mathematics and solving of problems [30]. In the case of grammar teaching, such method was applied in Mexico for the first time. Similar way of teaching was used by Russian psychologists during formation of linguistic skills in school children starting with third grade of primary school [31]. In our previous study orientation for teaching of reading was created for initial levels of verbal activity with Mexican children [32].

The essential role of usage of "orientation card" consisted in two aspects. Firstly, the card helped to guarantee major reflection of all intellectual actions of pupils. Secondly, it was possible to guarantee stable comprehension of grammar aspects without memorization and without simple repetition. Operation of repetition and memorization cannot be considered as intellectual actions of children at school age [23,33].

Instead of repetition our main method consisted in elaboration and creation of examples and tasks according to rules marked on orientation card. Such elaboration and creation of examples was always guided by teacher and achieved by all children together. Our study proves the important the role of orientation base of action proposed by Galperin [7,34]. According to his theory, there is no stable successful action without previous orientation.

Our result confirmed that guided and organized way of teaching at primary school seems to be the most effective educational method. But the usage of guided and organized activities is not enough to guarantee successful school learning of specific school subjects as some authors claim [35]. Creation of methods and strategies for materialization and external representation of

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essential features of concepts and of actions with these concepts is another aspect for positive effects of educational programs [23]. Means of external orientation should be included during the first steps of teaching process as its obligatory part [26]. The content of orientation should include precisely essential features of concepts, which should be selected for classroom activities which include these concepts [36,37].

In our study, such specific means of external orientation included several essential aspects, which are frequently absent within traditional teaching of grammar. From this point of view it is important to establish the ways to guarantee the orientation in verbal categories according to general linguistic concepts [38]. Such essential aspects are:

1) Possibility to identify a word as unique object of intellectual action and as an element of the sentence;
2) Recognition of 2 general categories of words: with and without independent semantic meaning;
3) Possibility to assimilate logically general features of the concept of "type of words", that is semantic, grammar and morphological features of each type of words;
4) Possibility to operate with these features while reading and writing and giving examples;
5) Gradual passing to more independent action by pupils.

For all such aspects means of external symbolic and perceptual orientation were used, which may be observed in examples included in the article.

Our study shows that the children were able to generalize and to learn such essential features of the concept if they use these features all the time according to provided orientation. That means that generalized conceptual features will never be forgotten in future as it usually happens with memorized but no comprehended information [27]. Specific actions used instead of memorization in our formative experiment were as follows:

1) Comparison of sentences by number of used words;
2) Comparison of diverse words according to semantic, grammar and morphological changes;

3) Elaboration of exact examples for each rule;
4) Elaboration of different sentences with diverse types of words according to mentioned features;
5) Revision and correction of all tasks in group.

It is important to stress that such methods are not common in traditional schools in Mexico or in other Latin American countries [39]. It is even possible to say that they are absent in formal system of education. Our report is the first of its kind and unique for our countries. Our study is the first attempt in this field, which opens the possibility for creation and implementation of new methods of education in primary school. Among other matters, grammar concepts are practically isolated from pedagogical concern in educational system in Mexico [1]. Official programs tend to exclude grammar work and tasks from textbooks. Teachers receive no specific preparation for teaching of grammar at all. The reason is that grammar is understood as "complex" and "abstract" matter and methods usually are limited by constant memorization of something, which pupils cannot understand. Therefore, the formation of prior general skills within guided orientation and cooperation proposed in our study may guarantee positive assimilation of initial grammar categories in second grade of primary school. The only basic ability which will be required while working with our method is very basic ability of reading and writing. We may stress that our method helps even to improve and increase the level of reading and writing in school sessions. All these ideas may lead to urgent changes of traditional teaching of grammar in elementary school.

The results of our study show that the conflict in manner of teaching of grammar cannot be solved by exclusion of grammar from the content of primary school programs. Spontaneous development of formal concepts, as claimed in Piaget's genetic theory [40], does not occur at school. Only development of concrete methods for teaching based on solid psychological theory may change the situation with success in grammar abilities. Unlike the Secretary of Education in Mexico [1], which attaches the main importance only to the speed of reading as evidence of success in primary school (which does not mean comprehension of what is read), the method presented in our article ensures linguistic awareness in pupils. Such awareness could be achieved through organization of

specific school actions appropriate for generation of general linguistic abilities [25,41,42]. Awareness might be understood as reflection, which is essential feature of human intellectual activity [33,43].

Theoretical findings of activity theory applied to pedagogical psychology, expressed in the works of Galperin [7,8,11,12] and Talizina [5,13,37,44] are essential for improvement of educational research and practice. Our program for formation of initial grammar skills is an example of usage of historical and cultural psychology and methodology of qualitative genetic experiment proposed by L.S. Vygotsky and his followers. Formative experiments allow to create new abilities and new knowledge in children. Such approach of research is opposite to quantitative assessment or methods of observation without any participation of the researcher [40,45]. Our results open new perspectives for those interested in strengthen relation between historical cultural theory and practice of education and developmental psychology.

One of the evidence of our success was the fact that children started to read books at home. Their comprehension improved as well as their oral expression. Another evidence was constant positive emotional attitude of children in the college towards learning and reading. We believe that from the point of view of qualitative pedagogical and psychological research these data is very significant, as well as data of comparison of initial and last assessment.

We believe that future studies and research of psychologists together with teachers will help point out the right way for transformation of programs for teaching of grammar through development of specific methods suitable for different school grades and levels of education.

6. CONCLUSION

1. Our results have shown positive effects of the program for acquisition of initial grammar concepts by Mexican pupils.
2. Orientation base of actions and usage of external means for orientation (special cards) were main instrument, which allowed to achieve effectiveness in reflective knowledge of pupils and in grammar awareness.
3. The main principles of guided and joint activity including teacher and pupils in

classroom were applied with success for formation of general grammar concepts.
4. Formative experiment applied to introductive teaching of grammar categories proved to be useful method in educational psychology.
5. Orientation used in teaching should take into account types, levels and essential contents feature of concepts (general grammar categories).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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