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# Children's Aid to a Children's Dictionary

**Abstract**

This paper describes the first lexicographic decisions and the methodology of a linguistic data collection for the editing of a core dictionary as part of a hypermedial linguistic laboratory for primary school children. It is important to evidence the significant and determining aid the children can give to the compilation of a dictionary designed for their purposes and needs. As a matter of fact, one of the main features of the core dictionary is that the children are not only users of the final product, but also participate in the realization of the tool.

## 1. Introduction

The world today is characterized by the presence of tools, methods, concepts, and ways of thinking which are closely linked to the information technology revolution. Multimediality in particular has aroused great enthusiasm in different fields, including linguistic education where the hypermedial technology systems seem to be particularly promising.

Correct linguistic education should improve the knowledge of passive and active language, both from a quantitative and qualitative point of view. According to literature (Ghiselli 1985) starting from the beginning of primary school, the child should possess an active lexicon of 2,500/ 3,000 and a passive one of 10,000 words. However, the amount of active vocabulary does not necessarily imply a good command of the different meanings of words nor does it mean that the child is able to use them in appropriate contexts. Unfortunately, a good level of lexical competence is not always easy to achieve. The dictionary is traditionally considered as one of the most authoritative tools for this purpose, and the habit of dictionary consultation should make it possible for the child to improve both the production and understanding of language. However, the dictionary is generally unattractive for both students and teachers and its refusal is often linked to certain features such as size, metalanguage and layout of the material.

Unlike the traditional paper dictionary, which is a static repository of knowledge, the multimedial dictionary with its typical characteristics of

interactivity, updating, multiple access, etc. can be an attractive and flexible tool by which even some sensorial aspects of language can be recovered.

## 2. Proposal

This paper describes the first lexicographic decisions and the methodology of linguistic data collection for the editing of the core of a multimedial dictionary for primary schools.

The preparation of a dictionary especially designed for children is an important and demanding task. It is in fact essential that the product offered to the child is as much as possible able to meet his needs, taking into account the many difficulties connected with linguistic development. For this reason we asked the children of some schools to collaborate personally as "authors" in the preparation of the first nucleus of the dictionary, even if the final editing of the work will be our responsability.

This work is carried out within the framework of "Addizionario", a special project of CNR (Italian National Research Council) aimed at the creation of a hypermedial linguistic laboratory in which the child can study his native language at various levels of difficulty and from different points of view.

## 3. Data collection

The idea of an active participation of the children in the creation of the dictionary appeared to be very interesting, although we were perfectly aware that this would present numerous problems both from a methodological and practical point of view. It was necessary to study the various ways in which the children could be involved in the different activities, to prepare the protocols of the tasks to be assigned, and to choose a first list of words on which to start working.

As for the participants in the activity, we decided to involve children of the fourth and fifth classes of the primary school and, in order to provide a higher level lexicon for children of all primary school classes, it was decided to also include data collected in the first class of the secondary school ('Scuola Media'). The children in the first three years of the primary school were excluded since certain activities such as the definition of words cannot be assigned before 9–10 years of age, when the child is aware that the word is distinct from its related object (Piaget 1923).

About 400 children from Pisa, Lucca and Turin schools participated in the preparation of the dictionary. It was decided to work on a first nucleus of about 1,000 words, including nouns, verbs and adjectives chosen according to usage frequency criteria. This list was obtained from the intersection of the most frequent words of a children's written language corpus (Marconi et alii 1993) and the most frequent words resulting from an oral data collection (Caramelli et alii 1994).

### 3.1 Description of the activities

The children were asked to sign a mock "contract-letter", accepting to collaborate in the creation of the dictionary; they were involved in several tasks which they thoroughly enjoyed, feeling they were the real protagonists of an important project.

The work lasted for several days and was divided into two phases: the first phase was aimed at obtaining spontaneous data from the children, while the purpose of the second was to enrich the linguistic material previously produced.

Over a period of three days, the children were handed three forms with different tasks to be performed in succession: 1) the "definitions form" containing five words for which the child was requested to provide one or more definitions; 2) the "examples form" in which the child was asked to provide at least two sentences illustrating the use of the word; 3) the "free associations form" in which the child was asked to link each given word with other somehow associated words.

Finally, the children were also asked to make drawings for both concrete and abstract nouns.

In the first phase the word was the only stimulus given to the child. It should be noted that unlike other similar experiences, points 1) 2) 3) were proposed as written tasks, in order to obtain more formal definitions and not only colloquial explanations of the meanings of the words.

Furthermore, during each task, the words were proposed without any context, since we did not want to influence the children in choosing among the different meanings of the word or in providing examples and associations.

In order to test the actual understanding of the definitions produced, in some classrooms we proposed a type of "guessing-game", asking the children to guess a word after reading the definition given by the children of the same age in other classes. This activity was an important check since some definitions that we found rather obscure or insufficient, were instead generally understood by the children.

In the second phase, still to be completed, the material collected was reconsidered and reelaborated. The children were requested to provide synonyms, opposites, diminutives, pejoratives, augmentatives, idiomatic expressions, etc. for each defined word. We were happy to observe that the children showed great pleasure and enjoyment in performing the different metalinguistic tasks as if they were playing. In some classrooms the children continued to work spontaneously even after the lesson or at home, collecting proverbs and idiomatic expressions from parents, grandparents, friends, etc.

## 4. Compilation of the dictionary

It is important to stress the essential role the children can play as "authors" of a dictionary designed for their purposes and needs, even if we are those responsible for its final editing. At the end of the work carried out with the children we shall have at our disposal an invaluable repository of data to be used for the compilation of the dictionary.

We present here the most important points, resulting from the activities, to be taken into account in the compilation phase.

*a) Vocabulary used by the child*

It is very important to use words comprehensible to the child since we know how difficult it is to understand the metalanguage used in the dictionaries and even in children's dictionaries. In order to guarantee a better understanding of the definitions we will use as much as possible the lexicon actually provided by the children during the activities.

*b) Modes used by the child when providing the definitions*

The definitions produced by the children can provide useful indications about the definition modes to be used for a better understanding of the meaning of words. For example, in order to define concrete nouns, children preferably use taxonomies, functions and attributes, while reference to personal experiences and examples taken from everyday life are more frequently used to define abstract nouns.

*c) Meanings given by the children for each word*

This type of information is useful to establish the priority to be given to certain meanings with respect to others, and also to decide which polysemies are to be included in the dictionary, and to what extent.

*d) Examples provided by the children*

These are an important repository of contexts-in-use, and they are all the more efficient since they represent a slice of everyday life. The dictionary will also include examples taken from a corpus of children's spoken language on which we are working and which currently consists of about 100,000 word-forms.

*e) Free associations produced by the children*

The associations most frequently produced by the children will be used to establish, in the computer dictionary, links among words. These links reflect the children's experiential world and can differ from those of the adults.

*f) Drawings made by the children*

The children's drawings will form the graphical part of the dictionary and will appear next to the definitions and examples. It was interesting to ask children to make drawings also for the abstract nouns, owing to the particularly curious and significant responses obtained. For example for the word "moment" one child represented a watch, while another represented two lovers, or for the word "male" a child drew both a man and a woman crossing out the woman.

Together with the linguistic data chosen for the core dictionary there is also other material – such as funny or eccentric definitions – which contains conceptual or orthographical errors reflecting the child's ideas, experiences, false beliefs, etc. All this material which cannot be included in the main dictionary will be assigned an appropriate position and be fully exploited for the realization of other parts of the hypermedial linguistic laboratory.

## 5. Use of the dictionary

The main dictionary has been designed so as to function either independently or alongside a child's personal dictionary. In this way the child can interact with the dictionary in a livelier manner compared to the traditional dictionary. It is in fact more stimulating for the child to have multiple access to the word, to dispose of drawings, pictures, sound, animation, etc. as well as to find the definitions written in a familiar

language and according to the definition modes typically used by the child (as described in 4).

By clicking on suitable buttons, the child can interrogate the dictionary, looking for the definition of a word or obtaining the relevant drawing. It is also possible for him to look for other associated words which can be parts of the same object or for words which are conceptually linked according to the "frame" produced by the children during the association task. When clicking on a particular button the child can also hear the sound connected with certain words (e.g. barking of a dog, falling of the rain) or he can see particular things, animals, or people in motion. If the child wants to add new entries or new information to the words present in the core dictionary, the program will ask him his personal details and will create a file in which the above mentioned information is stored. We wish to stress how important it is for the child not only to have available a dictionary with these particular features, but also to be able to build his own dictionary in which he can insert personal material knowing that this can be used to enrich the dictionary.

Once the prototype has been completed, we intend to put this tool at the disposal of a number of primary schools for testing. As a matter of fact it will be extremely useful to obtain feed-back from the schools – consisting in comments and suggestions as well as children's files – which will contribute to improve the core dictionary.

The material produced by the children can be used by the teacher, researcher or psychologist to study the development of the child's lexical competence. To this purpose the children's production is automatically encoded according to the standards of the CHILDES Project (MacWhinney 1991), which is currently the most widespread system used to analyze child language.

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