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Naming Amongst 6 Year Old Children

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1 Introduction

1.1 Purpose

The purpose of this paper is to present the first steps and the first results of a long term study, the CoPS project, about early assessment of dyslexia in children using the translated computer program CoPS (Cognitive Profiling System) and other screening tests. CoPS has been developed as an early identification method established by reference to cognitive precursors, such as phonological awareness and memory (Singleton et al 2000). The final aim in the long-term study is to analyse the language among monolingual Swedish speaking and Swedish/Finnish bilingual Finnish children and the specific symptoms language impairment has in these groups. Furthermore, it will be studied how these characteristics develop, and which characteristics are significant in developing dyslexia. The children have now been screened at the age of 5 years (N 400); some of these have been thoroughly assessed at the age of 6 years (N 130). The children's language skills will be reassessed at the end of the second school year including assessment of reading and writing skills.

Phonological processing plays an important role in literacy development as well as language abilities involving vocabulary and even grammar (Catts et al. 2000). Nauclér and Magnusson 2000 have done a longitudinal study of language impaired children vs. control children, evaluating spoken as well as written language capacity. They found a significant difference between the groups in a semantic word retrieval task, whereas no significant difference could be seen in a phonological retrieval task. Also, the scores in naming and language comprehension differed significantly between the groups. In written language, there was no difference in decoding scores, but there was a difference in reading comprehension between the groups. These results suggest that there are difficulties in different semantic processes in language impaired children which are influent in speech as well as written language.

The semantic aspect is what makes the dichotomy of mono- and bilingual children especially interesting. In our clinical work as speech and language pathologists, we find that the processes differ in these two groups; but we haven't analysed how and why it happens.

We want to point out the diversity in naming as a semantic process in different groups of six-year-old children. There are different strategic styles among the groups of children. The purpose of this study is to find the characteristics in the naming process that are communicatively efficient and can be seen as a normal stage in the development of naming in child language and find which characteristics are to be treated as symptoms of language impairment. It will be shown that there is a trend that these processes are different from each other in the different groups.

Because of the lack of results of the neuropsychological evaluation, the groups of children with poor language capacity cannot yet be referred to as having a specific language impairment, but their language level is severely beneath the expected age level.

1.2 Subjects

At this stage of our study we have the results of 31 children (there will be a total of 130) divided into four groups as follows:

- SLI group Swedish (here called LIS; N 10)
- SLI group bilingual (here called LIb; N 2)
- Control group Swedish (here called CS; N 11)
- Control group bilingual (here called Cb; N 8)

The children have been divided into two different groups as a result of a screening test administered to them when they were five year olds (N = 400 children). In one group are the children with poor language capacity (here called the language impaired, LI-group). The other group is the control group, which is a random sample of the total number of children that did not show clear language problems in the screening test.

Both of these two groups are further divided according to bilinguality. Half of the final bilingual subjects have Finnish speaking mothers and Swedish speaking fathers, the other half of the bilingual subjects have Swedish speaking mothers and Finnish speaking fathers. All of them have been exposed to both languages from birth, and all of them have been in Swedish day-care from the age of at least five years.

1.3 Methods

The children have been tested in both expressive and impressive language skills on the following language levels: semantics, syntax, morphology and phonology. The semantic production will be analysed for pragmatics. Linguistic awareness on the phonological level has also been tested, as well as memory functions. A neuropsychological test will be done with each of the subjects, and some of the bilingual children will be tested to be able to determine their Finnish language level.

In this paper, we analyse the picture naming process according to the results of the children in the Renfrew Word Finding Vocabulary test from which different types of data have been recorded. In addition to the scores, total naming time and naming processes when the production is other than the target word has been recorded.

In this study, we have used a descriptive model worked out for this analysis in order to easily be able to analyse the false production in the picture naming. The classes have been chosen in order to describe what happens in the naming process, and are described as follows:

<u>Semantic</u>: production semantically close to the target word (e.g. /pilbåge/ pro pil) /bow/ pro arrow

<u>Literal</u>:   production phonologically close to the target word (e.g. /viol/ pro fiol) /violence/ pro violin

<u>Description</u>: The target word is being described with a new word or sentence (e.g. /spelare/ pro gitarr) /player/ pro guitar

<u>Classification</u>: The produced word is semantically over or under the target word in its classification hierarchy (e.g. /byggnad/ pro fyr). /building/ pro lighthouse

<u>Finnish</u>:   A Finnish word or a direct translation is being used instead of the target word (e.g. /maila/ pro racket, /kråkskrämmare/ pro fågelskrämma) /maila/ pro racket,)

<u>None</u>:   The child says 'don't know' or cannot name or describe the picture

<u>W</u>ord form: The child is not quite sure how the word exactly sounds or is built (not dysphonological problems) (e.g. /fågelskrämmare/ pro fågelskrämma) */crowscare/ pro scarecrow*

<u>Vis</u>ual: The wrong part of the picture is named, or is visually coded wrongly. (e.g. /horisont/ pro fyr) */horizon/ pro lighthouse*

<u>Neo</u>logism: A spontaneously produced non-word (e.g. /drage/ pro mudd) */dragger/ pro cuff*

<u>Ver</u>b: The child produces a verb instead of the target noun (e.g. /borrar/ pro borr) */drilling/ pro drill*

<u>Ges</u>ture: The child shows the target word with a gesture or by showing its use.

The examples above have been chosen from the real sample, and translated artificially into English with the remaining process features. Later, 50% of the total productions will be categorised by a second person following the same classification instructions in order to get inter-rater reliability.

Related to the naming process, categorisation has also been tested, as well as the capacity to make analogue concepts. These results will not be considered in this paper.

Word finding in spontaneous speech and picture describing will be taken into consideration as related linguistic processes in our future works.

In this stage of the study, as the number of subjects in the groups is too small, we have decided not to statistically analyse the results except to show and compare the mean values. The results of this study are thus not statistically significant, but the trends can, nevertheless, be interesting.

2 Results

This paper highlights the need for a more accurate analysis of the results. However, the mean values of the test results already show that these different groups of subjects show different profiles in their naming process, which is valuable knowledge for further research. The semantic difficulties of the bilingual language impaired child are of a different nature than the same difficulties of the monolingual language impaired child. The strategy differences between the Swedish groups and the bilingual groups are interesting to examine, as they show diversity.

2.1 Score aspect

The results in Table 1 show that even in the scoring analysis bilinguality should be taken into consideration. The bilingual control children score at the same level as the LIS children, which indicates that bilingual children should have their own norms in naming tests.

Table 1. Mean scores, Renfrew

	LI	Control
Biling.	25,9	28,6
Swed	28,5	36,3

2.2 Time aspect

The bilingual children, regardless of whether or not they are language impaired, clearly need more time in their naming process.

Table 2. Mean times, Renfrew, whole test

	LI	Control
Biling.	06:26	06:02
Swed	04:11	04:53

As seen in Table 2, the Swedish language impaired children are faster than the control group, which is related to the naming processes they use. This will be analysed later in this paper.

2.3 Naming process aspect

The average number of errors of the four groups is distributed as shown in Table 3.

Table 3. Distribution of naming errors

	sem	litt	des	cla	fin	none	w	vis	neo	ver	ges
LIb	5,2	0,6	3,2	2,0	3,8	<u>7.7</u>	0,8	0,7	0,1	<u>0.2</u>	0,0
LIS	<u>8.0</u>	<u>1.0</u>	3,0	<u>3.5</u>	1,0	3,0	<u>1.5</u>	0,5	<u>1.0</u>	0,0	
Cb	3,9	0,5	<u>5.2</u>	1,2	<u>3.9</u>	3,1	1,3	<u>1.0</u>	0,1	<u>0.2</u>	<u>0.5</u>
CS	2,9	0,1	2,3	0,4	1,3	2,9	1,1	0,7	0,0	0,0	0,0

3 Discussion

In conclusion, the language impaired monolingual children show phonological naming problems more often than the other groups, which also explains their fast naming speed in the total test contrary to the other groups that use slower processes. This indicates that this specific parafasic trend (substitution of phonemes) is more likely to be a symptom of language impairment in the monolingual (Swedish) group than in the bilingual group. The monolingual children are also less sure of the word gestalts and use more classifications in their naming. The bilingual child appears to have difficulty in finding any word at all. If the target word is missing, the language impaired bilingual child searches but gives up. The bilingual control child is slow in naming, does not find the target word as accurately as the Swedish child, but uses strategies that are pragmatically efficient: describes, chooses a Finnish word, or uses gestures.

A methodological problem remains to adjust: in analysing the naming processes quality also has to be taken into consideration. Is the word the child chooses appropriate, or is it impossible for the listener to understand the target word? For example, if the child describes a camel as /an animal with a hump/ it should be possible to find it in the statistics as an appropriate description versus the more inappropriate description /something you can ride on/ or even /a kind of an elephant/ for the same word.

The study is ongoing and the results are preliminary, as only 31 of the 130 children's productions have been analysed.

Acknowledgement

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Bilingualism and writing difficulties. On the second-language development of immersion pupils with writing difficulties

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1 Background

"Early total immersion" is a program where monolingual children (Finnish-speaking children in Finland) attend a kindergarten and a school where the teaching is based on the children's second language. The aim of the program is to make it possible for pupils to learn good functional proficiency in a new language, while at the same time learn the same factual content as pupils who partake in so-called "traditional" teaching.

For the first few years, all activities take place in the second language. But the amount of teaching in the pupils' first language increases gradually in the higher grades so that about half the teaching at the upper levels is in the pupils' first language. (See e.g. Genesee 1987; Laurén 1999.)

The immersion program differs from other teaching that takes place in a language other than the pupils' mother tongue. For instance, the program is, in principle, meant to be suitable for all children independent of their linguistic and cognitive qualifications. Children are not tested for participation in the program, which means that individual variation in the classroom can be as great as in so-called traditional teaching.

Since considerably more instruction takes place in a language other than the pupils' mother tongue in an immersion program, it has been necessary to adopt a somewhat different way of working. Subject teaching in a second language implies pupil-centered instruction with emphasis on large units and individual learning (see e.g. Kaskela-Nortamo 1995, 2001). The conscious aim of immersion teachers to individualize would also seem to be the strength of early total immersion. Individualization will lead to a way of working that provides many different kinds of pupils with a functional proficiency in a second language. The teaching principles of immersion have, therefore, many advantages when it comes to pupils with special needs, and the program would seem to favour children who are traditionally regarded as weak language