SUMMARY

The author presents the results of the research in the area of the skills connected with defining abstract notions by children at the age 6-7 and 9-10 who have a cleft palate and/or cleft lip. The results are compared with the results from a group of children without such defects. In the research the author applies her own research tool and means of analysis. 80 children at the age of 6-10 took part in this study. In the research on defining notions of an abstract nature, the tasks from Pluta-Wojciechowska (2011) method was used.

It was found that children with a cleft significantly more frequently did not attempt the task connected with defining the notions, there were no statistically significant differences between the subjects in the area of frequency of defining the notions by means of the superordinate notions. However, statistically significant differences in the frequency of the occurrence of defining by other means were found; the children with a cleft used this strategy more rarely than those without a cleft, in the case of the children with a cleft, we found statistically significant differences in the more seldom occurrence of the correct answer connected with the notion defined, if we take into consideration the distinguished means of defining the notions.

The children with a cleft obtained worse results in the tests of the skills connected with defining abstract notions in comparison to the group of children without such imperfections.

Key words: cleft palate, cleft lip, cognitive linguistics.
INTRODUCTION

First of all, when commencing the presentation of the results of the research on defining the abstract notions by children at a younger age, I would like to introduce a few premises which reflect the justification for dealing with the given issue.

According to the reports presented by those researchers who deal with the ontogenesis of language, the development of this single and specific human skills is a result of the close-coupled influence of factors of a biological and psychological-social nature (Grabias, 1997, Kaczmarek, Pąchalska 2014). This means that the particular stages of development do not appear from nowhere, but they are the effect of the extraordinary influence of several factors. In this state of affairs, the interpretation of the achievements connected with the skill of using language should be of a heuristic nature.

Traditionally, children with speech disorders of an executive character, for example, with a disorder within the middle area of the facial skeleton, are perceived through the prism of non-normative realizations of phonemes (Kwiecień, Dudkiewicz, 1996; Hortis-Dzierzbicka, 2004, compare other disorders e.g., Michalik 2011, Czaplewskia, Sterczyński 2012, Jauer-Niworowska, Mirska, Jastrzębowska 2014, Szulman-Wardal, Mański 2014, Pąchalska, Borkowska, Kropotov 2014), which is found to be an important perspective; on the other hand, this perspective is not sufficient when we aim to help these children in order to make it possible for them to function in society in a satisfactory way, where the form and the quality of the produced texts play a significant role. In the descriptions of the speech of these children we usually profile the phenomena, such as nasality, the changes in the place of articulation, mimic synkinesis of the face, etc. (Wyatt, Sell, Harding, Harland, Albery, 1996; Kwiecień, Dudkiewicz, 1996; Trost, 1981). This is a relevant perspective in the analyses of speech disorders. However, we should also remember that the particular subsystems of speech do not develop in isolation, but they are interlinked with other elements. This implies the possibility to ask the question as to the degree to which the differences in the ontogenesis of children with a disorder within the facial skeleton will influence not only the conditions of the development of the phonetic-phonological system, but also some other linguistic skills, for example, the ability to define abstract notions (compare e.g., Kaczmarek, Pąchalska 2014, Vivas, Garcia-Garcia, Vivas, Pereaa-Bartolomé 2014).

One of the most intriguing directions in language research, which may be the basis of this research, is that of cognitive linguistics. This is not, however, a homogenous trend. In this article I am chiefly using the reports of R. Langacker, who is a distinguished representative of the abovementioned area. It is worth underlining that the research within this perspective of cognitive linguistics accepts the a priori fact that there is non-separation between human linguistic skills and human psychomotor abilities (Langacker, 1987, 1998, 1991, 1995, 2003; Krzeszowski, 1988; Lakoff, Johnson, 1988; Kalisz, Kubinski, 1998; Nowakowska-Kempna, 1995, 2000a, 2000b, compare e.g., Vivas, Garcia-Garcia, Vivas, Perea-Bar-
tolomé 2014, Szulman-Wardal, Mański 2014). Hence, this area appears to be particularly noteworthy in the case of the research dealing with the use of language by people with developmental defects.

For various reasons ontogenesis in the case of a child with a disorder within the facial skeleton is different than in the case of a healthy one (McWilliams, Morris, Shelton, 1990; Golding-Kushner, 2001; Pluta-Wojciechowska, 2006, 2011). The basic differences concern the biological factors (the disorder within the lips and the palate, the difficulties in eating and drinking, the different biochemical basis of articulation, the necessity for surgical operations, the necessity for adaptation to the new conditions created by the stomatognathic organ during the surgical operation, etc.) and the psychological-social factors (some parents’ wrong attitude towards the child’s situation, too high or too low requirements towards a child, emotional trauma after the surgical operation, the emotional-social difficulties connected with the appearance of the face and difficulties with understanding the child’s speech, the early speech therapy, the risk of the early formation of metalinguistic competence, which may be the reason for the discouragement to speak in the face of frequent correction of the child’s speech, etc.). Such biological and psychological-social factors may create different configurations and, as a result, create a different path of ontogenesis for each child, including the development of its speech (Pluta-Wojciechowska, 2011).

The subject matter described by cognitive linguistics - which is worth paying attention to, is not only the simple relation of language to reality, but also of notions to concepts, some cognitive beings existing in the minds of people who use languages. They are revealed by their producers in their utterances. This approach is reflected in some metaphorical terms mentioned by R. Grzegorczykowa, namely, *conceptual-linguistic glasses or see-through plate* (Grzegorczykowa, 1996, p. 20).

For the clarity of the research perspectives supported by the author, it should also be remembered that the nature of the language symbols is connected with the perspective which reveals the language user’s point of view. It signifies that, on the one hand, we cannot fully predict which symbols will be used in the same situation, and, on the other hand, that the same situation, phenomenon or scene may be described differently by different people. As R. Langacker interlines, such phenomena have a strong confirmation in the fact that a man may conceptualize the particular scene in a different way, which is also connected with its imagery (Langacker, 1987, 1998, 1991, 1995, 2003).

Language is therefore an amazing medium as it provides man with the opportunity of presenting his perspective by means of language. The researchers describe this phenomenon by means of different terms, such as, *telephotographic lens* (Fisher, Gleitman, Gleitman, 1991), *imagery, structuring the scene, and imagery* (Langacker, 2001, 2003), *packing the existing notions in a specific way* (Tomasello, 2002), *linguistic lightening of the scene, linguistic filter* (Pluta-Wojciechowska, 2011). However, we have to notice that this linguistic perspective of the scene requires one to select the foreground character or event. It is con-
nected with the application of the proper grammatical exponents (tense, gender, plural or singular form, inflection), which make it possible for the language user to make the selected properties more precise. This in turn causes some explanation of the phenomena, attributes, points of view and, simultaneously, it causes some other features to be hidden. The same scene, experience, category may be described by means of language in a different way, which implies the existence of various semantic values.

One of the key notions which is used by cognitivists in order to explain this type of phenomena is the conceptualization and imagery of the scene. Due to the fact that these notions are relevant when we attempt to understand the methods of research and analyses of the skills in defining the abstract notions, we will clarify their meaning further on in this report.

According to R. Langacker’s view, conceptualization is identified with meaning. The same perspective is also found in the phrase *the meaning is based on conceptualization* (Langacker, 1995, p. 18). The author even writes that meaning is conceptualization. On the other hand, conceptualization is understood by R. Langacker more widely. It comprises both new and consolidated sensual experience (kinesthetic and emotive ones), recognition of the direct context (social, physical and linguistic one) etc. (Langacker, 1991, p. 2, from: Kardela, 1994, p. 77, compare e.g., Grabias 1997, 2001, Vivas, Garcia-Garcia, Vivas, Perea-Bartolomé 2014, Szulman-Wardal, Mański 2014).

Conceptualization as the experience of mental nature reveals the human way in the creation of meaning; thus it is an issue belonging to cognitive linguistics. For R. Langacker it has a dynamic character which implies that the meanings of the utterances are connected with conceptualization (Langacker, 1995, p. 18; 2001, p. 17). The consequence of such an interpretation of meaning is the comparison of language to a net built of nodes which become access not for the defined content of the given notion, but for its conceptualization.

In cognitive linguistics conceptualization is understood very broadly and concerns the processes which are not consciously observed in minds, but they concern the process of the creation of notions. It is associated with searching for and using past sensor experience, the processes of creating new categories, context knowledge, conceptual content, and the ways of their creation. The linguistic symbol (a single word, phrase, sentence) is – generally speaking – an intersubjectively shared and conventional name used for a specimen of a cognitive category behind which we may find conceptualization. R. Langacker proposes the theory saying that the semantic structures of different sizes that start to exist are the specific example of the conceptual structure or, in other words, that semantics is conceptual (Langacker, 1995, pp. 28, 53; see Lakoff, Johnson, 1988, pp. 254-256; Nowakowska-Kempna, 2000a).

Is it possible for us to reach the processes connected with conceptualization? And is introspection the best means of revealing the mechanisms of this phenomenon? The answer to the question is not that simple. Introspection can be useful in the analysis; however, the man who is a user of the language and un-
derstands the meaning of more or less complex structures of the language which he uses and listens to does not realize - metaphorically speaking – the “anatomy and physiology of the meaning”, that is, those unconscious processes of a mental nature governing the process of the creation of meanings - conceptualization. In order to reach the biology of the language, cognitive linguistics takes advantage of the whole arsenal of tools which allow us to produce the linguistic description of the means of building the meaning and discovering it within the context of the spoken discourse.

Conceptualization as a mental process is connected with the perception and explanation of communicative intentions. It is a psychological process which occurs in the course of cognitive processing, and – if we take another perspective – it is a phenomenon of a neurological nature (Langacker, 2001, p. 27). We may even say that one is a kind of psychological activity accomplished by a person who is learning something whose effect is the creation of the meaning used for this and not another scene. This type of created meaning has a subjective character as its creator is a person in the given situation. R. Langacker even writes: “the meaning is reduced to conceptualization (mental experience)” (Langacker, 1991, p. 2). Therefore, meaning=conceptualization=mental state of the subject defined by means of the content of the experience which is given to the subject and also, which results from the further part of this work, the imagery of the scene.

The elements from which the meaning is created as a result of conceptualization are not only – speaking in simple terms – the existing notions, but also conventional imagery (Langacker, 2001, p. 174). E. Tabakowska also writes: “the meaning is […] not only the defined structure of conceptual content (defined as a point of reference to the net), but also the defined way of presenting the content by the speaker. Each phrase starts to exist in the determined place and time and is created with the given communicative needs in mind” (Tabakowska, 1995, p. 56).

In the light of what has been said so far, each user of the language is a decision-maker who, on the one hand, has to take into account the possibilities included in the language and, on the other hand, in the issue of imagery, that is, showing the scene, who makes decisions allowing him to reveal the shades and the small differences in meaning, the decisions concerning which aspects to skip and which aspects to stress (compare e. g. Grabias 1997, 2001, Kaczmarek, Pałchalska 2014). The consequence of this process is constructing some different meanings of the same experiential situation.

The following issue which has to be discussed in the context of the research is imagery. R. Langacker explains these complex phenomena which take place during conceptualization, also those connected with imagery, by means of the metaphor of panorama. It may be stated that thinking by means of an analogy activated during the comparison of visual perception with conceptualization, facilitates our understanding of the linguistic phenomena. However, this does not entitle us to state that these areas of human activity are equal ones.

When analyzing the situation of perception, we may distinguish such elements as a spectator, the full field of observation, the frames of observation, the distin-
guished object (the object of observation), and the existing relations (Langacker, 1995, pp. 153-212, from: Tabakowska, 2001, p. 59). When using this perspective, R. Langacker describes some aspects of conceptualization in which, analogically to the perception situation, he distinguishes: the person who conceptualizes, the maximum scope of the semantic structure of the phrase, direct scope of the semantic structure of the phrase, the profile (the object of the observation) and the relations of imagery (Langacker, 1995). In this context, we may speak about imagery, portraying, or about the linguistic lighting of the scene. In order to understand it better, we may imagine, by means of the metaphor, that the same room can be lit by means of lights set in a different way. If they are used in variant forms, they will floodlit various corners of the room, the furniture and other accessories. Imagery, in the metaphorical convention, is the linguistic lighting of the experienced scene.

R. Langacker distinguished a few means of imagery which take into account 1. the level of precision, that is, the grade of definiteness, 2. the range of the general notion content necessary in order to understand the meaning of phrases, 3. the selection of the foreground which is identified with the profile, that is, the elements which attract the speaker’s attention, 4. the relation between the background and the figure which leads to such ant organization of the utterance where some situation or the object is observed against the other, 5. The accepted perspective which is connected with the mutual relation of the subject and the object of the observation, as well as with the location of the whole system in space and time. When describing imagery, the author uses such notions as: the profile, the base, the trajectory, landmark, which all serve to isolate some relevant elements of language for the user. The trajectory is in the center of our attention and corresponds with the grammatical subject (Langacker, 1987, 1998, 1991, 1995, 2003).

In the summary of the above points, we may conclude that conceptualization and imagery of the scene connected with it fulfill an important role in constructing the meaning expressed by means of linguistic symbols. Therefore, language is an amazing medium as it includes the offer of many options – from those simple words chosen from different categories which make it possible to show the proper level of precision for the intention, function or other chosen feature of the scene experienced, to the metaphors and complicated idioms, sentences as well as long narrations.

Defining words as a means of revealing the meanings

Research in the area of the skills connected with defining notions is an opportunity to gain some insight into the means of revealing the meaning with the use of different perspectives. Meaning – as it was shown above – embraces at least two elements, cognitive content and the way it is presented, that is, the construction or imagery of the scene. The same event, notion can be therefore described in different ways by means of language. What results is the fact that the meanings formed in this way will represent different semantic meanings (Langacker, 1995, p. 19-20).
When we write about defining, it is difficult to skip Aristotle’s perspective. He introduced the term *category* which helps to state an object and its fixture to a wider group. According to the researcher, defining does not mean explaining the word, but it means the description of the object defined by means of a word in such a way that it could reflect its essence – *universale*. In accordance with this theory, a definition describes what is necessary and sufficient at the same time in order to describe an object or phenomenon. In Aristotle’s view, the world consists of beings having the inherent features which become the basis of categorization. Thus, things or phenomena having one common feature or a set of features belong to the category. The classic theory of categorization with the use of the theory of sets, the definition of truth based on the classic logistics, for many years was used by structuralists who were convinced that language as a system can be described by means of strict rules with the use of the theory of plurality.

In the classic perspective, the aim of defining is to show the scope of the meanings of the notion, its explanation, and indicating its relevant features. These elements define the level and borders of the notion and, in this way, distinguish them from others. Defining, in this perspective, is called classical (*Uniwersalny słownik języka polskiego*). In the definition we may distinguish *definiendum*¹ and *definiens* (*Uniwersalny słownik języka polskiego*),² which fulfill different functions. Summing up, it may be said that in the definition there is some specific identity between *definiendum* and *definiens*. Therefore, the goal of defining is to reveal the equipollent of the unknown term (which is being defined) among the known terms.

**MATERIAL AND METHODS**

The description of the population studied

80 children at the age of 6-10 took part in this study, where:

- 39 were children with different types of cleft lip or/and cleft palate (22 at the age of 6-7, 17 at the age 9-10),
- 41 were without any developmental defects (22 at the age 6-7, 19 at the age 9-10).

In the group of the children with a cleft there were only those who underwent the basic surgical operations of closing the cleft and other operations connected with correction and supplementation. The surgical treatment of the children taking part in the study was not unanimous, because the operations were carried out at different medical centers. It is worth noticing that some of them underwent the operation of a one-stage closing of the cleft at the age of around the sixth – seventh month; in the other cases the gap within the lip was closed in their 3. – 6. - 7. month of life and the cleft palate cases at the age of about nine month.

¹ Definiendum „lat. „something that is to be defined“ log. «a word, a term being defined, the part of definition which is its element being defined” (*Uniwersalny słownik języka polskiego*…)
² Definiens „lat. „defining“ log. a word, a term chich defines, the part of definition being its defining element” (*Uniwersalny słownik języka polskiego*…).
In other cases after the closing the gap within the lip in the sixth-seventh month of life, the anastomosis of the palate took place in the children’s second year of life.

We qualified to the study those patients in whom there were no other developmental defects than those connected with their cleft. However, in the group of subjects there were children with hypoacusia at the level of 30-40 dB or for whom hypoacusia had occurred in the early years of their life. The majority of subjects had different maxillary-occlusive disorders and in some of them we could observe ankyloglossia (many children in whom ankyloglossia was tracked earlier had the frenulum cut even during the course of the operation of the anastomosis of the cleft, which should be perceived as an advantage). It is crucial to emphasize that the effect of surgical and orthodontic treatment looked different in different children. This is connected with the differences in the methods of treatment, the occurrence of iatrogenic factors, compensational mechanisms of the organism, the disorders in the course of the biological functions and other individual features of the child.

The children at the age of 6. – 7. and 9. – 10. with a cleft and the children without a cleft at the same age came mainly from urban areas, while the subjects’ parents’ educational background was comparable. The research was carried out at medical centers, schools and kindergartens; these were in Zabrze, Jankowice and Katowice. The children without any disorder within the middle part of the facial skeleton did not have other developmental defects, although in this group – in a way similar to the children with a cleft – there were children with some level of ankyloglossia and other occlusion disorders. The maxillary-occlusive defects were, however, less pronounced than in the case of the children from the first group.

THE RESEARCH METHOD

In the research on defining notions of an abstract nature, the author used the following tasks (Pluta-Wojciechowska, 2011):

The instruction – Answer the following questions:

• What does enjoyment mean?
• What does mathematics mean?
• What does painting mean?
• What does football mean?
• Who is Cinderella (Kopciuszek)?
• Who is a teacher?

It is worth underlining that, according to Piaget’s theory, children at the age of 6-7 are at the turn of preoperational thinking and the stage of concrete operations. The 9-10 year-old children’s cognitive development, according to this theory, is at the stage of concrete operations (Wadsworth, 1998, pp. 72-129). Therefore, according to the theory, the skill of understanding and defining of abstract notions may be difficult for these children. It was M. Kielar-Turska’s research which inspired me to deal with this issue in the study. This research focused on the children at the pre-school age (Kielar-Turska, 1989, pp. 54-59).
The means of analyzing of the research results

The children coped with the given tasks in different ways. They used the various means of expressing the meanings. In order to put them in some order, I applied the theory of cognitive linguistics. It was assumed that defining the notions may be perceived as a symptom conceptualization, constructing the meaning, which corresponds with the basic theses of cognitive linguistics (mentioned earlier). Conceptualization is associated with imagery, the scene and one of its dimensions is distinguishing the background. It implies understanding of one structure in relation to another, where one structure is in the foreground and the other becomes the background. The following means of imagery is making the elements more precise and accepting a perspective. According to the concept connected with cognitive linguistics, conceptualization embraces different experiences (for example, sensor ones, mental ones engaged in the creation of new notions, the knowledge resulting from the context, etc.). The meanings which appear and which are based on it can be described with reference to one or a few cognitive domains. This perspective of the mechanism of constructing the meaning causes one to take various shapes and forms in the case of different people. It is linked with the fact that the children do not only have different cognitive and linguistic experience, but they are also at different ages.

Having collected the children’s utterances/discourses, I analyzed them and it turned out that the subjects coped with the tasks in a different way. Due to the accepted form of the explanation of the meaning, I distinguished (Pluta-Wojciechowska, 2011):

- **giving the superordinate notion** whose part is the defined notion, which shows some kind of categorization, for example, *content is a feeling,* *mathematics is an area of study,* *painting is art,* *football is sport,* *Cinderella (Kopciuszek) is a character from a fairy tale,* *a teacher is a man who teaches,*
- **the description of the situation** which may be described by means of a notion which is defined, which is a sign of some precise processing and instantiation, for example, *content is something that occurs when you get something and you enjoy it,*
- **listing some attributes** which belong to the meaning of the notion, which is the indication of some domains which take part in constructing the meaning, for example, *content means laughing, enjoying something,*
- **other means** which consist in producing utterances which have some reference to the notions which are defined (sometimes some loose reference), for example, *content – sadness, happiness.*

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3 See G. Kleiber. The issue connected with the meaning of the word (Kleiber 2003, pp. 58-59).

4 It is worth focusing on the fact that when assessing definitions connected with the term mathematics as correct, I also accepted answers like: mathematics is a subject at school. While planning the task, I expected the answer mathematics is a science. The fact that I accepted the statement mathematics is a subject at school as the correct one is connected with the accordance between it and the child’s experience.
The research results

In the study the following statistical tests were used:
• chi-square test with Yates’ correction,
• test of the difference in the index figures of structure.

The statistically significant results were those for which probability was p<0.05. The results for which probability amounted to: p≥0.05, but p<0.10, were perceived as those which were at the border of significance. In the tables where we may find the results of the statistical test, the results which are statistically significant are in red and those which are at the border of statistical significance are in blue. In order to obtain more clarity in presenting the results, in front of the number showing the result of the statistical test the arrow is drawn. One indicates whether the feature which is analyzed occurs in the children with a cleft more often or more rarely compared with children without a cleft. Tables 1-7 show the results of the research with reference to the notions which are studied and to the distinguished means of defining and Table 8 shows the results of the statistical analysis (Pluta-Wojciechowska, 2011).

The results of the statistical analysis which we may find in Table 8 allow us to draw the following conclusions:
• children with a cleft significantly more frequently did not attempt the task connected with defining the notions,
• there were no statistically significant differences between the subjects in the area of frequency of defining the notions by means of the superordinate notions,
• the children with a cleft significantly more seldom used in their definitions the strategy based on listing some attributes connected with the notions which were defined,

Table 1. The results of the study – defining the notions – no answer

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>I. %</td>
<td>I. %</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>1 4.55%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Painting</td>
<td>0 0.00%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Football</td>
<td>1 4.55%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>2 9.09%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Teacher</td>
<td>1 4.55%</td>
<td>0 0.00%</td>
</tr>
<tr>
<td>Average</td>
<td>0.83 3.79%</td>
<td>0.00 0.00%</td>
</tr>
</tbody>
</table>

Source: the data is based on the author’s research
the author did not find any statistically significant differences in the frequency of the cases of defining by means of the description of the situation, which can be named by means of the notion being defined,

there were statistically significant differences in the frequency of the occurrence of defining by other means; the children with a cleft used this strategy more rarely than those without a cleft,

in the case of the children with a cleft, we found statistically significant differences in the more seldom occurrence of the correct answer connected with the notion defined, if we take into consideration the distinguished means of

<table>
<thead>
<tr>
<th>Notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>I.</td>
<td>%</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>2</td>
<td>9.09%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>18.18%</td>
</tr>
<tr>
<td>Painting</td>
<td>4</td>
<td>18.18%</td>
</tr>
<tr>
<td>Football</td>
<td>8</td>
<td>36.36%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>8</td>
<td>36.36%</td>
</tr>
<tr>
<td>Teacher</td>
<td>13</td>
<td>59.09%</td>
</tr>
<tr>
<td>Average</td>
<td>6.50</td>
<td>29.55%</td>
</tr>
</tbody>
</table>

Source: the data is based on the author’s research

Table 3. The results of the study – indicating some attributes included in the scope of the meaning

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>I.</td>
<td>%</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>5</td>
<td>22.73%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>14</td>
<td>63.64%</td>
</tr>
<tr>
<td>Painting</td>
<td>9</td>
<td>40.91%</td>
</tr>
<tr>
<td>Football</td>
<td>2</td>
<td>9.09%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>8</td>
<td>36.36%</td>
</tr>
<tr>
<td>Teacher</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Average</td>
<td>6.33</td>
<td>28.79%</td>
</tr>
</tbody>
</table>

Source: the data is based on the author’s research
defining the notions (altogether different means of defining, that is, giving the superordinate notion, the description of the situation, listing some attributes which belong to the meaning of the notion, other means),

• we found no statistically significant differences between the subjects in the frequency of the occurrence of wrong answers, although such differences were found in the group of children at the age of 9-10.

A supplement to the analysis embracing the type of the strategies of defining used by the subjects can be quality analysis connected with the words/expressions used within the particular strategies of defining.

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**Table 4. The results of the study – the description of the situation**

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>l. %</td>
<td>l. %</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>10</td>
<td>45.45%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Painting</td>
<td>5</td>
<td>22.73%</td>
</tr>
<tr>
<td>Football</td>
<td>10</td>
<td>45.45%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>3</td>
<td>13.64%</td>
</tr>
<tr>
<td>Teacher</td>
<td>8</td>
<td>36.36%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>6.00</strong></td>
<td><strong>27.27%</strong></td>
</tr>
</tbody>
</table>

**Table 5. The results of the study – other means of expressing the meaning**

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>l. %</td>
<td>l. %</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>4</td>
<td>18.18%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Painting</td>
<td>1</td>
<td>4.55%</td>
</tr>
<tr>
<td>Football</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Teacher</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>0.83</strong></td>
<td><strong>3.79%</strong></td>
</tr>
</tbody>
</table>

Source: the data is based on the author's research
Table 6. The results of the study – the incorrect answers

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The children without a cleft</th>
<th>The children with a cleft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-7 y.</td>
<td>9-10 y.</td>
</tr>
<tr>
<td></td>
<td>I.</td>
<td>%</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>18.18%</td>
</tr>
<tr>
<td>Painting</td>
<td>3</td>
<td>13.64%</td>
</tr>
<tr>
<td>Football</td>
<td>1</td>
<td>4.55%</td>
</tr>
<tr>
<td>Cinderella</td>
<td>1</td>
<td>4.55%</td>
</tr>
<tr>
<td>Teacher</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>1.50</td>
<td>6.82%</td>
</tr>
</tbody>
</table>

Source: the data based on the author's research

Table 7. The results of the study – the correct answers altogether

<table>
<thead>
<tr>
<th>Type of defining notions</th>
<th>The subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The children without a cleft</td>
</tr>
<tr>
<td></td>
<td>6-7 y.</td>
</tr>
<tr>
<td></td>
<td>I.</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>21</td>
</tr>
<tr>
<td>Mathematics</td>
<td>18</td>
</tr>
<tr>
<td>Painting</td>
<td>19</td>
</tr>
<tr>
<td>Football</td>
<td>20</td>
</tr>
<tr>
<td>Cinderella</td>
<td>19</td>
</tr>
<tr>
<td>Teacher</td>
<td>21</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>19.67</td>
</tr>
</tbody>
</table>

Source: the data is based on the author's research

Table 8. The results of the research in defining notions – no answer, the correct answer (using the superordinate notions, the description of the situation, listing some attributes which belong to the meaning of the notion, other means), the correct answers altogether, the wrong answer (the index figures of the statistical test)

<table>
<thead>
<tr>
<th>The aspect studied</th>
<th>The age group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 - 7 y.</td>
</tr>
<tr>
<td>No answer</td>
<td>10.0000</td>
</tr>
<tr>
<td>The correct answer</td>
<td></td>
</tr>
<tr>
<td>Using the superordinate notions</td>
<td>0.2989</td>
</tr>
<tr>
<td>Listing some attributes which belong to the meaning of the notion</td>
<td>0.0401</td>
</tr>
<tr>
<td>The description of the situation</td>
<td>0.4430</td>
</tr>
<tr>
<td>Other means of defining</td>
<td>0.0340</td>
</tr>
<tr>
<td>The correct answers altogether</td>
<td>0.0000</td>
</tr>
<tr>
<td>The incorrect answer</td>
<td>0.5000</td>
</tr>
</tbody>
</table>

Source: the data is based on the author's research
CONCLUSIONS

The research which was carried out concentrated on the defining of abstract notions by children at a younger school age while its analysis allowed one to draw the following conclusions:

• the research embraced the skills of defining abstract notions yet it does not reveal the full scope of understanding these notions, as in this study the children’s utterances and not passive speaking was taken into account,
• the children with a lip cleft received generally significantly worse results in the tests of the skill of defining abstract notions compared with the healthy children;
• the children with a cleft and the children without a developmental disorder use the same strategies of defining; however, the research has revealed some difference in the frequency of their occurrence;
• the most frequent strategy of defining used both by the children with disorders as well as by the children without the developmental disorder is using the superordinate notion, which causes the children’s definitions to be closer to the classic form,
• the research carried out should be continued with the aim of a more precise understanding of the reasons for the phenomena we have observed;
• the knowledge gained during the study and its analysis might be used in the course of the diagnosis and therapy of speaking disorders in children with a cleft lip and cleft palate.

The results lead to questions about the causes of the differences between the children with a disorder within the middle part of the facial skeleton and healthy children. Our attention is drawn to the more frequent occurrence of cases of a lack of any answers given by the children with a cleft when compared with those who without. What seems relevant here is the question as to whether the former did not face up to the task because they were not able to accomplish it or whether they did not do it because they were not sure if their definition was correct.

While commenting on the reasons for the worse results achieved by the children with a developmental disorder when compared with the healthy children, we ought to suppose that they are connected with the activity of disadvantageous biological conditions and those of a psychological and social nature resulting from the disorder in the central part of the facial skeleton. We have discussed some of them at the beginning of this report (see McWilliams, Morris, Shelton, 1990; Golding-Kushner, 2001; Pluta-Wojciechowska, 2004, 2005a, 2005b, 2006, 2008, 2011, Hortis-Dzierzbicka, Stecko, Dudkiewicz, 2000; Hortis-Dzierzbicka, 2004; Hortis-Dzierzbicka, 1999; Jakima, Szczepańska, 1996; Jurków, 2005; McWilliams, Matthews, 1979; Morris, 1962; Nation, 1970; Pawlica, 1998; Szczepańska, Łyjak, Dudkiewicz, 1996; Shames, Rubin, 1979; Smith, McWilliams, 1968; Smith, McWilliams, 1968; Spriestersbach, Darley, Morris, 1958; Szczepańska, Łyjak, Dudkiewicz, 1996). Future research into language in the case of children with a cleft should deal with the groups of children who differ in various features, for example, the parents’
attitude, the means of therapy, the illness history, the properties of the child's emotional and social sphere, the level of speech understanding, the way in which the child copes with the disorder, etc. The above features might modulate the rate and strength of speech development also in the aspect of the skills of defining the notions which have been tested in the present research.

REFERENCES

Pluta-Wojciechowska, Abstract notions in children


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