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Coding of word formation structures by children/adolescents with deeper intellectual disability (on the example of the category of the tool names)

ABSTRACT: Renata Marciniak-Firadza, *Coding of word formation structures by children/adolescents with deeper intellectual disability (on the example of the category of the tool names),* Interdisciplinary Contexts of Special Pedagogy, No. 22, Poznań 2018. Pp. 215–235 Adam Mickiewicz University Press. ISSN 2300-391X. DOI: https://doi.org/10.14746/ikps.2018.22.13

Word formation plays an important role in the child's linguistic and cognitive development, because the ability to interpret word formation structures and active use of the knowledge of derivation rules are the most important manifestations of linguistic competence at the lexical level. The aim of the article is a linguistic interpretation of selected names of tools obtained from children and adolescents aged 6–19 with diagnosed moderate and severe intellectual disability.. In the article, the author would like to draw attention first of all to the existence of word-formation structures in the linguistic awareness of children / adolescents and to the fact whether newly formed words are created in accordance with word-formation patterns existing in the Polish language or they diverge from these patterns.

KEY WORDS: word formation, tool names, word formation skills, moderate and severe intellectual disability

Introduction

Word formation plays an important role in the child's linguistic and cognitive development[1]. Words very early begin to mediate in the child's perception of the surrounding world and exert a decisive influence on the development of their cognitive processes. From the earliest moments of life, children strive to understand the world: they asks questions, want to know, and search for adequate names. Nomination is very important, because children really get to know people, things, objects only at the time when they distinguish them using a separate name. Until a referent has a name in the child's personal language, it remains an unidentified part of paralinguistic reality[2]. As stated by Amelia Dziurda-Multan: "In a personal language, children refer to reality, denominates it and reveal their attitude towards it. They name every object, person, thing, phenomenon using an appropriate name"[3]. Ida Kurcz, on the other hand, ascertains that the human cognitive system categorizes the world, allows distinguishing in it sets of real objects and phenomena, and creating categories. A special group are ontological categories that serve to systematize and interpret the image of the world, e.g. categories of things, movement, place, activity, event, state, quantity, manner, property, time, cause, God and human person. The categorization process is a process of creating a system of concepts in the mind of a small child[4].

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[1] E. Muzyka-Furtak, *Kwestionariusz słowotwórczy w ocenie kompetencji językowej dzieci z zaburzeniem słuchu*, [in:] *Metody i narzędzia diagnostyczne w logopedii*, ed. M. Kurowska, E. Wolańska, Dom Wydawniczy Elipsa, Warsaw 2015, p. 251.

[2] A. Dziurda-Multan, *Dziecięce sposoby tworzenia nazw*, Wydawnictwo Katolickiego Uniwersytetu Lubelskiego, Lublin 2008, p. 19, 155.

[3] A. Dziurda-Multan, *Dziecięce sposoby tworzenia nazw*, Wydawnictwo Katolickiego Uniwersytetu Lubelskiego, Lublin 2008, p. 7.

[4] I. Kurcz, *Język a psychologia*, WSiP, Warsaw 1992, pp. 223–225; I. Kurcz, *Psychologia języka i komunikacji*, Wydawnictwo Naukowe „Scholar" Warsaw 2000, pp. 160–161, 167.

As confirmed by the most important word-formation theories, e.g. the theory of apperception of Jan Rozwadowski[5], the logical-syntactic theory of Witold Doroszewski[6], the theory of Milosz Dokulil[7] or the cognitive theory[8], the language builds the image of the world in human minds, and constituting a system of social categories, unifies cognition[9]. Therefore, a relationship between cognitive and linguistic processes is clearly visible on the word-formation level of language.

Perception and naming the world and its elements by children/adolescents with intellectual disability

The acquisition of linguistic competence by children is not an easy process, especially in field of the Polish language, characterized by the richness of word forms and the complexity of principles for word and sentence construction.

Intensive development of vocabulary as well as grammatical structures connected with the development of children's cognitive processes: memory, observation and attention, is observed in children with typical development at pre-school age[10], when children

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[5] J. Rozwadowski, *O zjawiskach i rozwoju języka. 9. O dwuczłonowości wyrazów*, „Język Polski" 1921, vol. 6, p. 129–139.

[6] W. Doroszewski, *Kategorie słowotwórcze*, „Sprawozdania z posiedzeń Towarzystwa Naukowego Warszawskiego", Wydz. I, 1946, vol. XXXIX, pp. 18–39.

[7] M. Dokulil, *Teoria derywacji*, translated by A. Bluszcz, J. Stachanowski, Ossolineum, Wrocław 1979.

[8] R. Grzegorczykowa, B. Szymanek, *Kategorie słowotwórcze w perspektywie kognitywnej*, [in:] *Współczesny język polski*, ed. J. Bartmiński, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2001, pp. 469–484.

[9] S. Grabias, *Język, poznanie, interakcja*, [in:] *Język. Interakcja. Zaburzenia mowy. Metodologia badań*, ed. T. Woźniak, A. Domagała, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2007, p. 376.

[10] In the literature on the subject, it is stated that a child in the second year of life discovers that every thing has its own name (cf. Aitchison 2002, p. 128; Stawinoga 2007, p. 65).

assimilate a language system, i.e. a specific lexical resource and basics of grammar from its environment[11].

The explosion of naming, the desire to denominate everything around consists in labelling what is within the field of vision and leads to children becoming aware of the fact that words are symbols that refer to things. Next, the label is extended to other elements of the same type[12]. The perceived objects first as a whole (or a set of features) are attributed to a particular conceptual class and in this way new phenomena are assigned to the general class of concepts known earlier, and then, based on a distinctive feature, they are distinguished from other similar elements of this class[13].

Word formation development cannot be considered in isolation from the formation of the dictionary. When considering word-formation phenomena from this perspective, first, the following question should be asked: what do children have to do to learn the words of a given language?

First of all, as emphasized by Ewa Muzyka, they must learn to isolate words in the speech stream, extract parts of words and identify topics, inflectional endings and affixes. Secondly, they must learn to recognize potential meanings of individual elements, reaching to various ontological categories established to represent and organize the surrounding world, the category of objects, activities,

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[11] H. Borowiec, *Kategorie interpretowania rzeczywistości w języku dzieci*, [in:] *Język – interakcja – zaburzenia mowy. Metodologia badań*, ed. T. Woźniak, A. Domagała, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2007, p. 107; see also M. Zarębina, *Kształtowanie się systemu językowego dziecka*, Ossolineum, Wrocław 1965; M. Zarębina, *Język polski w rozwoju jednostki. Analiza tekstów dzieci do wieku szkolnego. Rozwój semantyczny języka dziecka*, Wydawnictwo Naukowe WSP, Kraków 1980; L. Kaczmarek, *Nasze dziecko uczy się mowy*, Wydawnictwo Lubelskie, Lublin 1966; M. Chmura-Klekotowa, *Neologizmy słowotwórcze w mowie dzieci*, „Prace Filologiczne" 1971, no. 21, pp. 99–235; M. Mnich, *Sprawność językowa dzieci w wieku wczesnoszkolnym*, Impuls, Kraków 2002.

[12] R. Stawinoga, *Twórczość językowa dziecka w teorii i praktyce edukacyjnej*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2007, p. 65.

[13] E. Muzyka-Furtak, *Twórczość wyrazowa dzieci 7-letnich*, „Logopedia" 2011, vol. 39/40, p. 57.

relations, and properties. Thirdly, they must learn to represent potential meanings with the identified word forms[14].

In order to be able to correctly recognize, determine or create a morphemic structure of words, children should have a modelled image of their categorical significance, be able to see differences expressed by the affix and differentiate lexically (fruit, frui**ty**, fruit-**ful**), understand derivation with a phonetic exchange (r**óg**-ro**ż**ek [horn, small horn]), recognize grammatical categories of words and their integration in the complete meaning[15].

Gradually, individual thematic ranges are extended with new words that expand the network of semantic connections[16].

According to the author, the general directions for acquisition of vocabulary by children can be summarized as follows:
- first understanding, then production,
- first the content words, then the functional ones,
- first concrete, then abstract,
- first related to the situation, then detached,
- first nouns, then verbs, pronouns, adjectives, adverbs, and finally prepositions and conjunctions,
- first the concepts from the basic level, then from the inferior and superior level,
- first unclear meanings (extended/narrowed), then definite ones,
- first words without inflection, then grammatically marked ones[17].

The development of vocabulary is intertwined with the development of grammar skills, the foundations of which are learnt very early by Polish-speaking children[18].

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[14] E. Muzyka, *Sposoby interpretowania konstrukcji słowotwórczych przez dzieci niesłyszące*, „Logopedia" 2007, vol. 36, p. 98.

[15] A. Giermakowska, *Ocena kompetencji słowotwórczej uczniów z trudnościami w czytaniu i pisaniu na poziomie edukacji wczesnoszkolnej*, „Szkoła Specjalna" 2012, vol. 5, p. 357.

[16] A. Wątorek, *Kompetencja językowa uczniów z lekką niepełnosprawnością intelektualną*, Nomos, Kraków 2014, p. 17.

[17] A. Wątorek, *Kompetencja językowa uczniów z lekką niepełnosprawnością intelektualną*, Nomos, Kraków 2014, pp. 16–17.

[18] E. Łuczyński, *Fleksja języka polskiego z punktu widzenia ontogenezy mowy*, „Biuletyn Polskiego Towarzystwa Językoznawczego" 2002, vol. 58, p. 158.

There is evidence, as reported by Wątorek, that even small children analyse the internal structure of words, separating them into morphemes. One of the proofs is the ability of three-, four-year-old children to generate their own words, or so-called children's neologisms. Following a pattern of familiar words, through numerous analogies, children create new names needed for communication at a given moment[19].

In cognitive terms, the ability to discriminate is essential for the development of linguistic communication. Speck emphasizes that children should learn to perform four forms of discrimination, there they must:

1. Understand that the symbol (word) refers to a specific object or that it represents, for example, an object or activity.
2. Distinguish between different conditions in a given environment, which differ from one another and which are identified and categorized through own language system, that is, distinguish between things and processes.
3. Distinguish between various language symbols; the point is to properly distinguish between similarly sounding symbols, e.g. *stift* "pencil" and *schiff* "ship", as well as see fundamental differences, for example between a *cow* and *scissors*.
4. Make distinctions between different order of symbols, that is, different word order in a sentence. It matters if we say "the door is closed" or "is the door closed" or: "Mark leads Ann" or "Ann leads Mark"[20].

The above comments apply to children with typical development. The perception and naming the world and its elements look slightly different in children with intellectual disability.

In the literature on the subject, attention is drawn to the fact that intellectual disability is not only a "delay of development, but

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[19] A. Wątorek, *Kompetencja językowa uczniów z lekką niepełnosprawnością intelektualną*, Nomos, Kraków 2014, p. 17.

[20] K. Kaczorowska-Bray, *Kompetencja i sprawność językowa dzieci z niepełnosprawnością intelektualną w stopniu znacznym, umiarkowanym i lekkim*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2017, p. 104.

a different quality of development"[21], to the inharmoniousness of this development, a completely different life experience of children with this dysfunction[22], to the fact that "activities of the highest organization or those which were formed at the end in phylogenesis and ontogenesis, which are above all thinking and speech[23], are developmentally retarded and delayed to the greatest extent", finally, that the dictionary used by these children is poor, agrammatisms persist for a long time, different types of speech disorders are reported[24].

Disturbances in the subjective (individual), and therefore cognitive, motivational and emotional determinants of the acquisition and use of language, are, as reported by Kaczorowska-Bray, inscribed in the definition of mental disability[25].

In literature, on the one hand, it is emphasized that in children with moderate intellectual disability, the ability to understand reality and formulate conclusions about it is significantly reduced[26], and

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[21] H. Nartowska, *Opóźnienia i dysharmonie rozwoju dziecka*, WSiP, Warsaw 1980, p. 106.

[22] J. Kostrzewski, *Różnice profilu inteligencji, niektórych uzdolnień oraz w cechach motoryczności dzieci umysłowo upośledzonych i normalnych*, [in:] J. Kostrzewski (ed.), *Z zagadnień psychologii dziecka umysłowo upośledzonego. Materiały pomocnicze do psychologii upośledzonych umysłowo*, vol. 1, Wydawnictwo WSPS im. M. Grzegorzewskiej, Warsaw 1978; J. Kostrzewski, *Podstawy współczesnej diagnostyki psychologiczno-klinicznej niedorozwoju umysłowego u dzieci*, J. Kostrzewski (ed.), *Z zagadnień psychologii dziecka umysłowo upośledzonego. Materiały pomocnicze do psychologii upośledzonych umysłowo*, vol. 1, Wydawnictwo WSPS im. M. Grzegorzewskiej, Warsaw 1978.

[23] H. Nartowska, *Opóźnienia i dysharmonie rozwoju dziecka*, WSiP, Warsaw 1980, p. 102.

[24] M. Bogdanowicz, *Psychologia kliniczna dziecka w wieku przedszkolnym*, WSiP, Warsaw 1985, pp. 88–89.

[25] K. Kaczorowska-Bray, *Zaburzenia komunikacji językowej w grupie osób z niepełnosprawnością intelektualną*, [in:] J.J. Błeszyński, K. Kaczorowska-Bray (ed.), *Diagnoza i terapia logopedyczna osób z niepełnosprawnością intelektualną*, Harmonia Universalis, Gdańsk 2012, p. 42.

[26] J. Kostrzewski, *Charakterystyka osób upośledzonych umysłowo*, [in:] K. Kirejczyk (ed.), *Upośledzenie umysłowe – Pedagogika*, PWN, Warsaw 1981; M. Bogdanowicz, *Psychologia kliniczna dziecka w wieku przedszkolnym*, WSiP, Warsaw 1985; R. Kościelak,

on the other hand, that they are able to give meaning to objects, have the ability to detach their thinking from the data of the current perception, they begin to consider various aspects (e.g. length, height, colour), as well as mutual relations between the features of objects, although the ability to extract important details, characteristics of phenomena and objects is significantly reduced[27]. The beginnings of understanding the relation of the part to the whole, the relation occurring between the superior and inferior concepts can also be observed in these children[28]. Children with moderate intellectual disability also have serious problems in remembering, storing, recognizing and reproducing information[29].

Children with severe intellectual disability are, as reported by Lidia Cierpiałkowska[30], a group similar to moderate intellectual disability in terms of both the clinical picture, as well as the genesis, pathomechanism and the co-occurring neurological and psychological disorders. However, the capacity level of all intellectual functions is lower. Conceptual and verbal thinking is deeply impaired[31].

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Psychologiczne podstawy rewalidacji upośledzonych umysłowo, PWN, Warsaw 1989; L. Cierpiałkowska, *Psychopatologia*, Wydawnictwo Naukowe Scholar, Warsaw 2007.

[27] J. Głodkowska, *Pomóżmy dziecku z upośledzeniem umysłowym doświadczać przestrzeni. Orientacja przestrzenna w teorii, diagnozie i rozwoju dziecka*, WSPS, Warsaw 2000, s. 66; L. Cierpiałkowska, *Psychopatologia*, Wydawnictwo Naukowe Scholar, Warsaw 2007.

[28] As in: E. Kudłacik, *Poziom funkcjonowania dzieci głębiej upośledzonych umysłowo w wieku przedszkolnym w zakresie porozumiewania się oraz umiejętności słuchowo językowych i wzrokowoprzestrzennych*, [in:] E. Minczakiewicz (ed.), *Komunikacja – mowa – język w diagnozie i terapii zaburzeń rozwoju u dzieci i młodzieży niepełnosprawnej*, Wydawnictwo Naukowe AP, Kraków 2002, pp. 40–69.

[29] J. Kostrzewski, *Charakterystyka osób upośledzonych umysłowo*, [in:] K. Kirejczyk (ed.), *Upośledzenie umysłowe – Pedagogika*, PWN, Warsaw 1981; M. Bogdanowicz, *Psychologia kliniczna dziecka w wieku przedszkolnym*, WSiP, Warsaw 1985; R. Kościelak, *Psychologiczne podstawy rewalidacji upośledzonych umysłowo*, PWN, Warsaw 1989; L. Cierpiałkowska, *Psychopatologia*, Wydawnictwo Naukowe Scholar, Warsaw 2007.

[30] L. Cierpiałkowska, *Psychopatologia*, Wydawnictwo Naukowe Scholar, Warsaw 2007, p. 178.

[31] E. Kudłacik, *Poziom funkcjonowania dzieci głębiej upośledzonych umysłowo w wieku przedszkolnym w zakresie porozumiewania się oraz umiejętności słuchowo językowych*

Incorrect course of speech development and incorrectly formed mechanisms of its functioning cause that it does not properly fulfil its role "as a factor supporting the reception of denominated phenomena and as a factor of generalization (of a concept) that drives all adjustments of (new) received information to the former ones present in the memory "deposit", arranged in models defined by words"[32].

Disturbances of linguistic communication, visible on every level of the language description (phonology, morphology, syntax, semantics and pragmatics), deplete the process of expressing meanings, recognizing thoughts and reaching reality (culture)[33].

Children with intellectual disability are usually described as those preferring concrete vocabulary in their vocabulary resources[34].

Researchers agree that assimilation of concrete vocabulary and semantic relationships occurs in children with intellectual disability and in normal children in the same way, although in the first group at a definitely slower pace. The advantage of vocabulary with a concrete meaning increases with the profoundness of disability[35].

Research conducted by Tadeusz Gałkowski[36], allowed assessing the state of development of passive and active vocabulary within

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i wzrokowoprzestrzennych, [in:] E. Minczakiewicz (ed.), *Komunikacja – mowa – język w diagnozie i terapii zaburzeń rozwoju u dzieci i młodzieży niepełnosprawnej*, Wydawnictwo Naukowe AP, Kraków 2002, p. 41.

[32] Z. Tarkowski, *Mowa osób upośledzonych umysłowo i jej zaburzenia*, [in:] T. Galkowski, E. Szeląg, G. Jastrzębowska (ed.), *Podstawy neurologopedii. Podręcznik akademicki*, Uniwersytet Opolski, Opole 2005, p. 588.

[33] M. Michalik, *Kompetencja składniowa w normie i zaburzeniach. Ujęcie integrujące*, Wydawnictwo Naukowe Uniwersytetu Pedagogicznego, Kraków 2011, p. 178.

[34] M.R. Griffer, *Language and children with intellectual disorders*, [in:] V.A. Reed (ed.), *An introduction to children with language disorders*, M.A. Pearson, 4th ed., Boston 2012; J.J. Błeszyński, *Niepełnosprawność intelektualna. Mowa – język – komunikacja. Czy iloraz inteligencji wyjaśnia wszystko?*, Harmonia Universalis, Gdańsk 2013.

[35] M. R. Griffer, *Language and children with intellectual disorders*, [in:] V.A. Reed (ed.), *An introduction to children with language disorders*, M.A. Pearson, 4th ed., Boston 2012, pp. 250–251.

[36] T. Gałkowski, *Dzieci specjalnej troski. Psychologiczne podstawy rehabilitacji dzieci opóźnionych umysłowo*, Wiedza Powszechna, Warsaw 1979, pp. 194–195.

eleven categories (everyday objects, body parts, animals and birds, toys, vegetables and fruits, vehicles, parts of clothing, people, sizes, shapes, colours) in the group of children with severe disability. The obtained results confirmed that in both vocabularies concrete vocabulary, useful for children in numerous life situations, was dominant. Everyday objects, body parts, names for animals and birds, toys obtained the highest ranks.

The vocabulary used by children with moderate and severe disability has often a different meaning than the dictionary one: a small number of words present in their lexical resource must serve the child in many situations, hence the presence of specific "keywords". It is true that the use of a word in a broader than dictionary meaning occurs in all children, but in the case of children with intellectual disability, it concerns a significant part of the vocabulary resource[37].

Coding of word formation by children/adolescents with deeper intellectual disability, methodological issues

A. Aim of the paper

The aim of the paper is the linguistic interpretation of selected names of tools obtained as a result of pilot studies in one of the rehabilitation, education and remedial centres in the Łódź Voivodeship. The aim of the pilot studies is to answer the question whether to include children/adolescents with deeper intellectual disabilities in the research concerning the acquisition of word formation rules.

In the article, the author would like to draw attention: a) to the way of existence of word formation structures in the linguistic awareness of the subjects; b) to the fact whether the newly created words are formed in accordance with the word formation patterns existing in the Polish language, or whether they diverge from these patterns.

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[37] K. Kaczorowska-Bray, *Kompetencja i sprawność językowa dzieci z niepełnosprawnością intelektualną w stopniu znacznym, umiarkowanym i lekkim*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2017, p. 137.

B. Study group

The study group consists of children and adolescents aged from six to nineteen with diagnosed moderate and severe intellectual disability with multiple disability. These people cannot fulfil their schooling obligation in public schools. Out of 39 children attending the centre, originating from similar backgrounds, only eight (six with moderate disability and two with a severe one) fulfil the condition of research, or communicate verbally with the environment. At the stage of pilot studies, data on the sex of the respondents were treated as insignificant. Furthermore, such a large age range was assumed intentionally, the criterion was the fulfilment of schooling obligation.

C. Research procedure

In the studies concerning assimilation of word formation rules in the process of language acquisition, should concentrate on, above others, the assessment of understanding (reception, decoding, interpreting) and creating (expression, coding) of word formation structures.

The ability to understand and create word formation structures is treated as follows, according to Ewa Muzyka-Furtak:

– understanding is a formal and semantic analysis of constructions, decoding meanings of constituent elements of formations, is the interpretation of word formation constructions, consistent with social arrangements and own experience;

– creating is a formal and semantic synthesis of features constituting the meaning of constructions, is the encoding of meanings into a word formation construction, is the production consisting in recalling specific units formally and semantically connected with a specified set of semantic features, from own lexical resource[38].

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[38] E. Muzyka-Furtak, *Konstrukcje słowotwórcze w świadomości językowej dzieci niesłyszących*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2010, p. 80.

The source of the gathered information about word formation competences in children are in this case experimental tests, consisting in asking, under conditions, which are favourable for children, of properly formulated questions in order to extract a specific word form.

In terms of the scope of research, exploration and analysis covered two types of skills that assess the level of acquisition of word formation rules, or skills of understanding (decoding, interpreting, reception) and creating (coding, expressing) derivative words.

The article is limited to the discussion of coding skills for names belonging to one selected word formation category, or the category of tool names, according to the classification of Renaty Grzegorczykowa[39]. The questionnaire contains twenty five questions concerning names of the tools. Regarding the rule of selection of the study material, mainly the distribution criterion was applied.

In terms of coding, the questionnaire checked the ability to create a name based on a word formation paraphrase or, in the case of difficulties, the ability to create on the basis of a set of semantic features expounded from the structural importance of the formation[40]. As a support, a pictorial questionnaire was also used.

The questionnaire was completed individually with each child. Each child was instructed how the test would look like and what was expected from the child. Furthermore, exemplary answers were presented to each child.

Coding of word formation by children/adolescents with deeper intellectual disability, conclusion from the study

Language expresses feelings, observations and thoughts of a small human being connected with reality[41]. As emphasized by Stefan

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[39] R. Grzegorczykowa, *Zarys słowotwórstwa polskiego. Słowotwórstwo opisowe*, PWN, Warsaw 1982.

[40] E. Muzyka-Furtak, *Konstrukcje słowotwórcze w świadomości językowej dzieci niesłyszących*, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin 2010, p. 81.

[41] A. Dziurda-Multan, *Dziecięce sposoby tworzenia nazw*, Wydawnictwo Katolickiego Uniwersytetu Lubelskiego, Lublin 2008, p. 89.

Szuman, thoughts of children are processes in which they not only denominate an object with an appropriate name, but processes in which the small human being claims something about the features of the object, the relationships it can enter with other objects, the activities the object performs, the functions it fulfils. If thoughts of children did not have a nominative basis, that is, if they could not adequately name the objects they perceive, they could not include them in their vocabulary[42]. Amelia Dziurda-Multan adds that "children first distinguish features necessary for the performance of practical activities in objects and then their concepts of everyday objects are created"[43].

Conclusions regarding the ability to create word formation constructions by study children/adolescents with moderate intellectual disability:

Children/adolescents are good at coding (creating, expressing) certain tool names, cf. *budzik [alarm clock]* (6,1; 15,6; 17,11; 19,1; 19,6)[44], *drukarka [printer]* (17,11; 19,1; 19,6), *dźwig [crane]* (8,11; 15,6; 19,1), *grzejnik [radiator]* (8,11; 17,11; 19,1; 19,6), *gwizdek [whistle]* (15,6; 17,11; 19,1), *koparka [excavator]* (6,1; 19,1; 19,6), *lejek [funnel]* (15,6; 17,11; 19,6), *lokówka [curler]* (15,6; 17,11; 19,1; 19,6), *odkurzacz [vacuum cleaner]* (6,1; 8,11; 15,6; 17,11; 19,6), *skakanka [skipping rope]* (6,1; 8,11; 15,6; 17,11; 19,1; 19,6), *spinacz* (do bielizny) [*clothes peg* (for undergarment)] (8,11; 15,6; 17,11), *spinacz* (biurowy) [*paper clip* (used in office)] (15,6), *zapałka [match]* (15,6; 17,11; 19,1), a bit worse at the names *gaśnica [fire extinguisher]* (17,11; 19,6), *suszarka [dryer]* (6,1; 19,1) *wycieraczka* (do butów) [*wiper* (for shoes)] (17,11; 19,6), *zapalniczka [lighter]* (15,6; 17,11) and *krajalnica [slicer]* (19,6), *pokrywka [lid]* (19,1), *śrubokręt [screwdriver]* (17,11) or *trzepaczka [beater]* (17,11).

This shows that the majority of children more often used in the answers the principle of clarity of meaning, using known formants,

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[42] S. Szuman, *Rozwój treści słownika dzieci. Zagadnienie i niektóre wyniki badań*, [in:] *O rozwoju języka i myślenia dziecka*, ed. S. Szuman, PWN, Warsaw 1968, pp. 10–11.

[43] A. Dziurda-Multan, *Dziecięce sposoby tworzenia nazw*, Wydawnictwo Katolickiego Uniwersytetu Lubelskiego, Lublin 2008, p. 19.

[44] Age of the subject/subjects in years and months is specified in brackets.

what is more, selecting one of the most productive formants in the category of tool names, or. *-acz*, *-ak*, *-aczka*, *-arka*, *-nik*.

In addition, the subjects with regard to the above names of tools either did not name the referent at all, see no name for: *drukarka [printer]* (8,11), *dźwig [crane]* (19,6), *gaśnica [fire extinguisher]* (8,11), *gwizdek [whistle]* (19,6), *krajalnica [slicer]* (6,1; 8,11), *lokówka [curler]* (8,11), *pokrywka [lid]* (8,11), *spinacz [clothes peg]* (19,6), *śrubokręt [screwdriver]* (19,1), *trzepaczka [beater]* (6,1; 19,1; 19,6), *wycieraczka* (do szyb) [*wiper* (for windscreen)] (8,11), *zapałka [match]* (8,11) or they specified incorrectly created formations, creating, among others, word formation neologisms. The latter, according to some researchers, gives evidence of the creativity of the child, and according to others, the immaturity of his speech. "Perhaps, as stated by Agnieszka Wątorek, neologisms appear where someone's knowledge and related vocabulary end, to give vent to the need of verbalisation of thoughts that is stronger than fear of making a language mistake"[45]. the incorrectly created forms included: a) constructions created with incorrect formants, which are however typical of the discussed word formation category, see *gwizdak* 'gwizdek [whistler]' (6,1), *lejak* 'lejek [funnel]' (19,1), *odkurzak* (19,1); b) constructions created with incorrect formants, unusual for this category, see. *gaśninka* 'gaśnica [fire extinguisher]' (19,1), *grzejka* 'grzejnik [radiator]' (6,1), *kopara* (17,11), *krajniczka*, *krojonka* 'krajalnica [slicer]' (17,11), *krajanka* 'krajalnica [slicer]' (19,1), *pokrywa*[46] 'przykrywka [lid]' (19,6), *spinka* 'spinacz (do bielizny) [clothes peg (for undergarment)]' (6,1; 19,1; 19,6), *spinka* 'spinacz (biurowy) [paper clip (used in office)]' (6,1; 8,11; 19,1), *suszar* 'suszarka [dryer]' (8,11), *wycieranka* 'wycieraczka (do butów) [wiper (for shoes)]" (19,1), *zapała* 'zapałka [match]' (6,1), *zapałkarka* 'zapałka [match]' (19,6).

The use of the formants *-ka*, *-anka*, *-niczka*, *-ara* etc., which are not typical for the category of tool names by children/adolescents, may

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[45] A. Wątorek, *Kompetencja językowa uczniów z lekką niepełnosprawnością intelektualną*, Nomos, Kraków 2014, p. 109.

[46] The dictionaries of the Polish language allow the name „*pokrywka*" apart from the more common name „*przykrywka*" for the lid.

mean that these children know formants, know the rules of their use, but they do not know their meaning.

Very often, instead of the name of the tool, the subjects with moderate intellectual disability gave names of activities performed with the help of these tools/by these tools/devices, see *drukuje [prints]* 'drukarka [printer]' (15,6), *grzeje [radiates]* 'grzejnik [radiator]' (15,6), *kopie [excavates]* 'koparka [excavator]' (15,6), *kroi chlebek [slices bread]* 'krajalnica [slicer]' (8,11), *suszy [dries]* 'suszarka [dryer]' (15,6), *śrubki wkręca [drives screws]* 'śrubokręt [screwdriver]' (15,6), *trzepie się [beats]* 'trzepaczka [beater]' (15,6), *wyciera się [wipes]* 'wycieraczka (do butów) [mat for shoes]' (15,6), *wyciera [wipes]* 'wycieraczka (do butów, do szyb) wiper [for shoes, for windscreen]' (6,1), *wycieramy buty [we wipe shoes]* (15,6), sporadically, the names of the products of the activity, see *druki [prints]* 'drukarka [printer]' (6,1), *loczki [curls]* 'lokówka [curler]' (6,1). In the case of one child, the verbal answers were of an echolalic nature, see *kopie [excavates]* 'koparka [excavator]' (8,11), *leje [fuelling]* 'lejek [funel]' (8,11), *trzepie [beats]* 'trzepaczka [beater]' (8,11).

In addition to the above-mentioned tool names, children/adolescents created derivatives: a) based on other word formation rules, see *podnośnik [lift]* 'dźwig [crane]' (17,11); b) based on the basis with word initial position cut, see *szarka* 'suszarka [dryer]' (17,11).

The answers created by children/adolescents on the way of associations and combinations appeared several times, see *dywan [carpet]* 'wycieraczka (do butów) [wiper [for shoes]' (8,11), *ogień [fire]* 'gaśnica [fire extinguisher]' (6,1), *patelnia [frying pan]* 'przykrywka [lid]' (15,6), *do patelni [for a frying pan]* 'przykrywka [lid]' (6,1), *szpilka [pin]* 'spinacz (biurowy) paper clip [used in office]' (17,11), *szyba [glass]* 'wycieraczka (do szyb) wiper [for windscreen]' (19,6), *śrubka [screw]* 'śrubokręt [screwdriver]' (6,1), *śrubek [of screw]* 'śrubokręt [screwdriver]' (8,11; 19,6), *zegar cyk, cyk [clock tick tock]* 'budzik [alarm clock]' (8,11), *od włosa [for hair]* 'suszarka [dryer]' (19,6).

Sometimes the associations were very distant, see *gas* 'gaśnica [fire extinguisher]' (15,6) (however, here a zero formant might have been used), *lew [lyon]* 'lejek [funnel]' (6,1) (here it might have been

derived from *wlew [infusion]*, *wlewać* [pour]), *pokrętka [tap wrench]* 'przykrywka [lid]' (17,11).

Slightly bigger problems appeared with the names of such referents as: *cedzak [colander]*, *otwieracz [opener]* or trzepaczka [beater] 'a tool, usually made of wire, used in the household to whip egg white'. The study children/adolescents usually know these objects, they know what they serve for (during the study they showed the activities which are performed with their use), but they cannot denominate them, see no name for: *cedzak [colander]* (6,1; 19,6), *otwieracz [opener]* (8,11) or they use incorrectly built formations, i.e. a) choosing inappropriate formants, which are however typical for the discussed word formation category, see *cedzarka* 'cedzak' [colander] (17,11); b) choosing inappropriate formants, unusual for this category, see *cedzanka* 'cedzak' [colander] (19,1), *otwieranie [opening]* 'otwieracz [opener]' (17,11), *otwórka* 'otwieracz [opener]' (19,1) or based on other word formation stems and using unusual formants, see *ubijanka* 'trzepaczka (do jaj) [beater (for eggs)]' (19,1).

Also for these names some of the subjects wrote the names of activities performed with the use of these tools/by these tools/devices, see *otwiera [opens]* 'otwieracz [opener]' (6,1; 19,6).

One of the children created a name derived from a wrong word formation stem, but used a formant typical of tool names, see *odkrywacz* 'otwieracz [opener]' (15,6).

On the way of associations and combinations, a form of *obiad [dinner]* 'cedzak [colander]' (15,6) was created.

Conclusions regarding the ability to create word formation constructions by study children/adolescents with severe intellectual disability:

The subjects with severe intellectual disability significantly differ from those with moderate disability They did not know and did not write numerous names, see no answer for: *budzik [alarm clock]* (9,6), *cedzak [colander]* (9,6), *dźwig [crane]* (9,6), *gaśnica [fire extinguisher]* (9,6), *grzejnik [radiator]* (9,6), *gwizdek [whistler]* (9,6), *lejek [funnel]* (9,6; 15,2), *lokówka [curler]* (9,6), *otwieracz [opener]* (15,2), *przykrywka [lid]* (15,2), *skakanka [skipping rope]* (9,6), *spinacz [clothes peg]* (9,6; 15,2), *suszarka*

[dryer] (9,6), *śrubokręt [screwdriver]* (15,2), *trzepaczka [beater]* (9,6; 15,2), *wycieraczka [wiper]* (9,6), *zapałka [match]* (9,6; 15,2).

In addition to correctly created derivatives, see *drukarka [printer]* (15,2), *odkurzacz [vacuum cleaner]* (9,6) people with severe intellectual disability wrote: a) formations based on correct word formation stems, but with incorrect formants, which are however typical of the category of the tool names category, see *gwizdak* 'gwizdek [whistler]' (9,6), *suszacz* 'suszarka [dryer]' (15,2); b) formations based on correct word formation stems, but with incorrect formants that are not typical of the tool names category, see *kopara* 'koparka [excavator]' (15,2), *krajanie [slicing]* 'krajalnica [slicer]' (15,2), *odkurzan* 'odkurzacz [vacuum cleaner]' (15,2), *skakanie [skipping]* 'skakanka [skipping rope]' (15,2), *spina*, *-y* (plural) 'spinacz [clothes peg] (for undergarment)' (15,2), *suszawka* 'suszarka [dryer]' (9,6).

Similarly, as in the case of people with moderate disability, it happened also here that one of the subjects reported no names of tools, but names of activities performed with the use of these tools/by these tools/devices, see *gasi [extinguishes]* 'gaśnica [fire extinguisher]' (15,2), *gwizda [whistles]* 'gwizdek [whistler]' (15,2), *wyciera [wipes]* 'wycieraczka (do szyb) wiper [for windscreen]' (15,2).

Several names given by the subjects occurred as a result of associations and combinations, both direct, see *auto [car]* 'dźwig [crane]' (15,2), *dzwonek [bell]* 'budzik [alarm clock]' (15,2), *garnek [pot]* 'przykrywka [lid]' (9,6), *misa [bowl]* 'cedzak [colander]' (15,2) and indirect, see *kredka [crayon]* 'drukarka [printer]' (9,6) (perhaps by association with printouts of colouring pages), *szuflada [drawer]* 'śrubokręt [screwdriver]' (9,6) (sometimes screwdrivers are kept in this place), maybe also *rękaw [sleeve]* 'budzik [alarm clock]' (9,6) (hands of some watches for children have the shape of sleeves/hands of a clown).

Conclusions

It is difficult to draw any specific conclusions with such small study groups. The formulation of detailed conclusions can only take place when representative and rich material is gathered to illustrate

the processes of acquisition of word formation rules. However, it is possible to propose a few general remarks:

1. Children/adolescents with moderate intellectual disability are relatively good at coding word formations, which are tool names, while people with severe intellectual disability are significantly worse at the study of the expression of tool names.

2. The conclusions from the above-mentioned study can verify postulates known from the literature on the subject that people with deeper intellectual disability, especially those with a severe one, know and use only a minimal resource of words.

3. The results of the study may also indicate the fact that the acquisition of language depends not only on the overall development of children, but also on the conditions provided to them by their family and the closest environment[47]. Factors determining the development of linguistic competence in children with intellectual disability include, among others, situations and events/life experience[48]. This can be evidenced by examples of the type of *drukarka [printer]*, *odkurzacz [vacuum cleaner]*, and even *gwizdak*, *kopara*, *krajanie [slicing]*, *odkurzan*, *suszacz*, *suszawka* etc. recorded in people with severe intellectual disability.

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[47] J. Porayski-Pomsta, *O rozwoju mowy dziecka. Dwa studia*, Ed. Dom Wydawniczy „Elipsa", Warsaw 2015, p. 48.

[48] Z. Dołęga, *Promowanie rozwoju mowy w okresie dzieciństwa – prawidłowości rozwoju, prognozowanie i profilaktyka*, Wydawnictwo Uniwersytetu Śląskiego, Katowice 2003, p. 30.

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