

FEATURES IN STRUCTURING RECEPTIVE MORPHOLOGICAL ABILITIES IN MENTALLY DISABLED CHILDREN

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ABSTRACT. This research emphasizes the complexity of the morphologic aspect from the assessment point of view, delimitating the necessity and the importance of elaborating new psycho-pedagogical tools that are meant to address language morphologic component from an assessment point of view. The research also stresses on the need of a curriculum that will be focused on developing morphologic competence, even in the context of mental disability, underlining the fact that morphologic abilities, in the context of mild mental disability, at the level of morphologic classes such as the one of the noun, verb, pronoun and preposition are functionally structure, in the receptive language plan.

Keywords: *morphological competence, flexible grammatical classes, uncountable grammatical classes, mild mental disability, moderate mental disability*

ABSTRAKT. Diese Studie –“Strukturierung der morphologisch rezeptiven Fertigkeiten im Rahmen der Schwachsinnigkeit“ - betont die Vielfältigkeit der morphologischen Seiten aus der Sicht der Evaluierung und zeigt die Notwendigkeit und Bedeutung der Entwicklung von verschiedenen pädagogischen Instrumenten, die den Ansatz von morphologischer Komponente in Bezug auf die Evaluation der Sprache ermöglichen. Die Studie unterstreicht auch die Bedeutung der Vertiefung eines Curriculums, um die morphologischen Fähigkeiten zu entwickeln, auch im Rahmen der Schwachsinnigkeit abfassend dass die morphologische Fähigkeiten im Rahmen der mildere Schwachsinnigkeit, auf dem Niveau einiger grammatikalischen Klassen als der Nomen, das Verb, das Pronomen und die Präposition die auf rezeptiver Ebene funktional strukturiert sind.

Schlüsselwörter: *morphologischer Kompetenz, flexible grammatikalische Klassen, nicht flexible grammatikalische Klassen, mildere Schwachsinnigkeit, mäßige Schwachsinnigkeit.*

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1. Theoretical background

Morphemic structuring is very deficient in the case of the children with mental disability. While the valid child acquires morphemes in the range 3-10 years old, the mentally disabled child presents a great delay at this level of the language. Thus, morphologic development remains incomplete (Popovici, 1994). The same aspect is emphasized by Willis, even from 1975. The above mentioned researcher developed an experimental study that completes the perspective belonging to Laura Lee, (1974), using the same tools she used in order to emphasize morph-syntactical complexity. Laura Lee, (1974) involved in her research 200 participants, all of them being valid children with ages within 3-7 years old range. Willis, (1975) completes her perspective by underlining the way morph-syntactical abilities were structured in the case of the mentally impaired children. The group of participants in Willis's research were divided within three category from the point of view of their chronological age, the group of those of 7, 9 and 11 years.

The tool he used was relatively simple, it focusing on underlining spontaneous linguistic samples complexity, the participants in the research were asked to describe a picture or an image, and their linguistic productions were registered and analyzed. The number of linguistic structures that were to be analyzed was 50. After the linguistic samples were collected, these were analyzed having into consideration the following grammatical categories and aspects: undefined pronoun, personal pronoun, verb (main verb-in Romanian predicative verb and secondary verb-in Romanian non-predicative verb), negation, conjunction, reversible interrogative structures, WH-questions (these are not specific for Romanian language).

Willis, (1975) underlined, through the research he developed, the fact that a child with a 70 % IQ (placed in the category of the children with mild mental disability) reaches a moderate level of morph-syntactic development, numerically expressed 5.99, level equivalent with the one reached by a normally developed child with a chronological age of 3 years and 3 months (the normally developed child involved in this research has a measured IQ within the range 85-115). The development delay that the mentally disabled child has is 3 years and 9 months.

In the case of an 11 years old child with a 70% IQ was underlined a development in the morph-syntactical area that reaches 6.68 points, level equivalent with the one reached by a child with a chronological age of 3 years and 6 months. In this case the delay in development was of 7 years and 6 months.

Popovici, (1994) emphasized the fact that there are important differences regarding morphological abilities among the not typically developed children and the one with mental disability, the researcher underlining these differences with respect to the way those children use prepositions, in years of delay the differences are of one year.

The American researcher (Willis, 1975) underlined the fact that, from the point of view of the morph-syntactic abilities development mentally developed children

included in his research study, with ages of 7, 9 and 11 years old reach developmental level corresponding to the one reached by typically developed children with ages within the range 3-4 years old.

In order to underline the fact that mentally disabled children faces delays but also plateau development at the linguistic level, Willis, (1975) developed a long term research. The data from this research proved that a typically developed child with ages within the range 3-7 years old reaches the following developing levels (morph-syntactic development-conjunctions), in percents (3.5; 6.1; 9.1; 13.4; 18.4), while a child with mental disability with the age within the range 7-11 years old reaches the following developing levels (morph-syntactic development-conjunctions), in percents (17.3; 14.6; 17.7; 11.8). Analyzing these data the following conclusion can be drawn> in the context of the mentally disabled children linguistic development is realized anachronistic marked by plateau and regression periods.

The same aspect is also underlined by the French researchers. These underline the fact that grammatical components are instable in the case of the mentally disabled children, the following grammatical components being numbered (article-morpheme of the grammatical category of determination-Neamțu, 2009) pronoun, auxiliary, prepositions, coordinating and subordinating conjunctions). In using verbal categories, such as time and aspect (grammatical category specific for French) are registered many problems. Regarding the way words are related, mentally disabled child also presents many troubles. Thus, a mentally disabled child uses put together 1-2 linguistic structures at the age of 3, while at the age of 8&9 he can reach the level of 3-4 linguistic structures, for reaching the level of correctly using 5-6 morph-syntactic units. Most of the mentally disabled children combine words through juxtaposition (Rondal; Seron, 1999).

The above mentioned researchers underline the fact that within the range 14-15 years old, mentally developed children do no acquires new abilities concerning morphological development. This aspect emphasizing the existence of several stages that are meant to facilitate linguistic development, stages related with mentally developed child cognitive and social functioning levels.

Even if new acquisitions at morphologic levels are not to be registered in higher chronological ages, the adolescent and the young child with mental disability score high performances at the level of linguistic structures, complexity put in evidence with MLU procedure. Thus, lexical, semantic and syntactic gaining contribute to making linguistic structures more stable and to improving morphologic performances even after 14/15 years old. This aspect was indirectly underlined by Willis, (1975) who spotted that one of the research limits is given by the used tool, this focusing on the necessity of assessing morphological and syntactical development within communicative context through multiple pedagogical tasks, as spontaneous linguistic production is marked by a language characterized through common linguistic structures., relevant for illustrating lexical development, and less eloquent for proving morph-syntactic complexity.

2. Experimental design

2.1. Objectives:

- elaborating a scale that is meant to allow assessing language receptive component at morphologic level, in the context of mild and moderate mental disability;
- elaborating a set of items based on which the above mentioned scale can be mentioned;
- delimitating the features of morphologic abilities in the context of mild and moderate mental disability, in the range 14-17 years old children.

2.2. Hypothesis:

- morphologic structuring in the case of the 14-17 years old children with mental disability is characterized through deficient aspects both regarding the countable and the uncountable morphological classes, but also in the case of the derivatives words classes and in the case of the homographs;
- there are significant differences regarding morphologic abilities structuring in the case of the children with mild and moderate mental disability both for the countable and uncountable morphologic classes.

2.3. Participants in the research:

The study developed on an experimental group of 16 participants with mental disability, 8 of them are diagnosed with mild mental disability and 8 of them are diagnosed with moderate mental disability. These participants have ages compressed in the 14-17 years old range, attending VIIth and VIIIth grades.

2.4. Experimental procedure:

- in the first stage of the research was elaborated an assessment scale for receptive morphologic language component and the pedagogical tasks that facilitate completing the scale;
- participants in the research were selected in the second stage of the research;
- in the third stage experimental data were collected and SPSS experimental data base was elaborated;
- in the fourth stage were analyzed and interpreted the obtained results.

2.5. Methods:

2.5.1. Explicative arguments

A scale that facilitates the assessment of the morphologic abilities in the case of the mental disabled children was elaborated within this research study. Having into consideration our previous experience regarding the assessment of language

morphological component (Hategan, 2009), as well as Shorr and Dale's, (1984) observations come out the necessity to elaborate a new tool for assessing morphologic abilities in the case of mentally disabled children, for receptive language dimension.

The majority of the probes and tests consist in a set of images, at least two of them among which the assessed child is asked to indicate the corresponding image for the aimed item. TROG (Test for Reception of Grammar; Bishop, 2003), a test used in Anglophone specialized literature and ECOSSE (Experimental program for grammar assessment; Leqocq, 1996), a probe used in francophone specialized literature are the most common assessment methods for morphologic language component assessment. A similar tool was elaborated and adapted to Romanian specialized field, the probe is entitled PRCMLR (Probe for morphologic categories reception in Romanian language-Hategan, 2009).

The need to elaborate a new psycho-pedagogical tool came out, especially for the mentally disabled children due to their cognitive rigidity and to the bias that they proved when a tool based exclusively on images reflexivity was used (Shorr; Dale, 1984).

The new elaborated tool is made up of two sections:

- the scale for assessing morphologic categories reception;

- a set of items that facilitate the scale completion. These items are elaborated as pedagogical tasks commonly put in practice in therapeutically and educational fields, aspect that contributes to the implementation of the scale, the ones that organize the assessment procedure will not be forced to pass through a training stage in order to get the necessary abilities to use the scale.

The two probes facilitate both the assessment of the receptive and the expressive component of the language, on morphological dimension. Within this study, the focus will be put on the results obtained after completing the scale at the receptive language level; in the future articles these data will be completed.

2.5.2 The description of the experimental tool:

2.5.2.1 The Assessment Scale for Morphologic Abilities-receptive level

The scale has as morphologic aimed component five grammatical flexible classes (countable classes: noun, verb, pronoun, numeral, adjective), three inflexible grammatical classes (uncountable classes: adverb, prepositions and conjunctions) and two classes that emphasize the tight relation between morphology and lexicology (derived words, homographs), but that are defining for morphologic abilities structuring in Romanian language, having into consideration the morphemic component they include (suffixes, prefixes, stress).

In noun class 14 items are included, these can be delimited in the following categories expressed in terms of foreseen cognitive-verbal abilities:

- discriminates and identify noun grammatical category with definite determiners;

- discriminates and identify noun grammatical category with indefinite determiners;
- discriminates and identify nouns taking into consideration their number;
- discriminates and identify nouns taking into consideration their gender.

All the mentioned abilities have as corresponding elements different tasks from oral, but also written receptive area, all participants in the research presenting lexical-graphical abilities. The number of items for nouns class are to be found in a greater number as this class is the most frequently used one within the conversational structures emitted by the participants in the research, it being the grammatical class that specialized literature indicates as being well structured, stable even in the cases of moderate mental disability (Popovici, 1994; Pruthi, 2007), thus a complex assessment can offer eloquent data with respect to the mental disabled children's morphologic abilities features.

In the verb class, three items are delimited, they being reunited at the level of single cognitive-verbal ability: discriminates and identify verbal grammatical category. In this way the stress is not put on the different grammatical aspects that compose verbal class: person, number, mode, diathesis, but only on time, it being considered the most important grammatical category, from a pragmatic point of view within the economy of conversational abilities, bearing in mind the fact that instrumental abilities, pre-requisites for oral and written language structuring include abilities that aim temporal planning (Rondal; Seron, 1999; Anca; Hategan, 2007).

In the adjectival category aspects referring to this grammatical class differentiation among others as well as aspects referring to comparison (stressing on comparison degrees). In order to depict those abilities that correspond to the above mentioned abilities, five items were elaborated.

The most used pronominal forms were aimed through the scale- personal and demonstrative pronouns, this based on the aspects concerning language ontogenetic development (Păunescu, 1997; Slama-Cazacu, 1969). For assessment two items were elaborated with respect to the pronominal class.

Quantity reception is assessed through cardinal numeral grammatical category. Within the scale there items are meant to ensure the assessment of the way morphologic abilities structuring is developed with respect to the numeral category.

Adverbial grammatical class is represented through seven items. The bigger number of items is due to the fact that another instrumental abilities are assessed through this grammatical category, they being spatial-temporal abilities (assessed through time and place adverbs) as well as the ability to express manner adverbial features (manner adverb).

In preposition grammatical class two items were formulated, the stress being put on the abilities to establish the propositional expressed relations by using the following structures: "on", "under", "in", "with", as well as on the ability to differentiate and to use composed preposition (in Romania is "de la" preposition, in English it is not a composed preposition and it can be translated "from").

Conjunction grammatical class is assessed through two items, the focus being put on “and”, “or” coordinator conjunctions, there are no items for assessing sub-ordinate conjunctions.

Both the grammatical class of derivate words and the one of the homographs were assessed through two items, morphologic language aspect being related to the lexical one, these two classes completing noun category.

2.5.2.2 The set of tasks used for facilitating the completion of the scale

The activities comprised within this set of tasks allow collating data about child`s performance, the above mentioned items were materialized at least three tasks. The assessor task is to quantify the success regarding a certain item from the scale when the child correctly solves two among the three tasks. Grammatical specialized terminology is not mandatory, it can be specified in the cases when the child knows and uses it (bearing in mind the fact that the participants in this research are in an advanced schooling stage, the VIIth-VIIIth grades).

The tasks comprised in this set can be receptive as guiding aspects, the assessor having the possibility to use them when he needs or he has the possibility to use his own working sheets in order to fill the scale with data about the children he works with. This allows the assessor to individualize the assessment and to complementary use the set of task with his own set of school tasks in order to get the best perspective about child`s grammatical abilities.

This set is based on common school tasks, following the features of the teaching and of the assessing activities from Romanian school with respect to morphological aspect, features proved by curricular documents (syllabuses, textbooks, curricular auxiliary tools).

3. Experimental data analyze

In order to underline the features of morphologic structuring in the context of mild and moderate mental disability Crosstabulation option from SPSS 17 was used. Thus, mild mentally disabled children prove superior performances in comparison to the one proved by the moderate mentally disabled ones, differences register at the level of all the scale variables. The fallowing tables comprise all the mentioned differences. The best structures morphologic receptive abilities identified in the case of the mild mental disability regard adjectival, verbal, adverbial and prepositional morphological classes. All the items of the scale corresponding to the above mentioned morphological classes are successfully solved by 6-7 participants in the research from the 8 ones.

Table 1.

Data association for noun class

		Diagnose		Total
		mild mental disability	moderate mental disability	
S	3.00	0	1	1
	6.00	0	2	2
	9.00	1	2	3
	10.00	1	2	3
	11.00	1	1	2
	13.00	1	0	1
	14.00	4	0	4
	Total	8	8	16

Table 2.

Data association for verb class

		Diagnose		Total
		mild mental disability	moderate mental disability	
V	1.00	0	2	2
	2.00	1	4	5
	3.00	7	2	9
	Total	8	8	16

Table 3.

Data association for adjective class

		Diagnose		Total
		mild mental disability	moderate mental disability	
A	.00	0	1	1
	2.00	0	3	3
	4.00	3	2	5
	5.00	5	2	7

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	Diagnose		Total
	mild mental disability	moderate mental disability	
A .00	0	1	1
2.00	0	3	3
4.00	3	2	5
5.00	5	2	7
Total	8	8	16

Table 4.

Data association for pronoun class

	Diagnose		Total
	mild mental disability	moderate mental disability	
P 1.00	0	2	2
2.00	0	5	5
3.00	1	0	1
4.00	3	0	3
5.00	4	1	5
Total	8	8	16

Table 5.

Data association for numeral class

	Diagnose		Total
	mild mental disability	moderate mental disability	
N .00	1	1	2
2.00	3	5	8
3.00	4	2	6
Total	8	8	16

Table 6.

Data association for adverb class

		Diagnose		Total
		mild mental disability	moderate mental disability	
Ad	5.00	0	4	4
	6.00	2	1	3
	7.00	6	3	9
	Total	8	8	16

Table 7.

Data association for preposition class

		Diagnose		Total
		mild mental disability	moderate mental disability	
Prep	.00	2	7	9
	1.00	0	1	1
	2.00	6	0	6
	Total	8	8	16

Table 8.

Data association for conjunction class

		Diagnose		Total
		mild mental disability	moderate mental disability	
C	.00	1	2	3
	1.00	4	2	6
	2.00	3	4	7
	Total	8	8	16

Table 9.

Data association for derivate words class

	Diagnose		Total
	mild mental disability	moderate mental disability	
Derive .00	1	4	5
1.00	4	2	6
2.00	3	2	5
Total	8	8	16

Table 10.

Data association for homographs class

	Diagnose		Total
	mild mental disability	moderate mental disability	
Homograph .00	3	7	10
1.00	2	1	3
2.00	3	0	3
Total	8	8	16

For underlining differences between the two categories of participants (U) Mann-Whitney Test was applied, using SPSS 17, having into consideration participants' in the research reduced number. Calculating the differences can be draw the conclusion that in the case of moderate mental disability, several morphologic aspects, in a high degree, will never be functionally acquired, stressing the assumption that morphologic abilities in the case of mental disability will never be completed (Willis, 1975; Popovici, 1994; Rondal și Seron, 1999). The research results can complete the above mentioned assumption, thus morphologic abilities structuring will never be completed in the case of moderate mental disability, underlining the importance of structuring a curriculum based on which morphologic abilities can be developed in the context of mental disability, especially in the case of mild mental disability. This curriculum, specially designed lacks in Romanian Educational system, the stress of instruction, regarding Romanian language for mentally disabled children being put on language other components- phonological and lexical component (Hategan, 2009).

The results in U test prove significant differences between the two participants in the research categories, at the level of the following morphologic classes: adjective, noun, prepositions, pronoun, homographs, and verb. These results can be consulted in the following tables.

Table 11.**U Test results for adjective class**

	Adjective
Mann-Whitney U	14.000
Wilcoxon W	50.000
Z	-2.012
Asymp. Sig. (2-tailed)	.044
Exact Sig. [2*(1-tailed Sig.)]	.065 ^a

Table 12.**U test results for homographs class**

	Homographs
Mann-Whitney U	14.500
Wilcoxon W	50.500
Z	-2.128
Asymp. Sig. (2-tailed)	.033
Exact Sig. [2*(1-tailed Sig.)]	.065 ^a

Table 13.**U Test results for prepositions class**

	Prepositions
Mann-Whitney U	9.000
Wilcoxon W	45.000
Z	-2.749
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.015 ^a

Table 14.

U Test results for verb class

	Verb
Mann-Whitney U	11.000
Wilcoxon W	47.000
Z	-2.477
Asymp. Sig. (2-tailed)	.013
Exact Sig. [2*(1-tailed Sig.)]	.028 ^a

Table 15.

U Test results for pronoun class

	Pronoun
Mann-Whitney U	6.000
Wilcoxon W	42.000
Z	-2.826
Asymp. Sig. (2-tailed)	.005
Exact Sig. [2*(1-tailed Sig.)]	.005 ^a

Table 16.

U Test results for noun class

	Noun
Mann-Whitney U	6.500
Wilcoxon W	42.500
Z	-2.718
Asymp. Sig. (2-tailed)	.007
Exact Sig. [2*(1-tailed Sig.)]	.005 ^a

Highly significant $p < .01$ were registered for verb, prepositions, pronoun and noun grammatical classes, both flexible and inflexible classes. There are no differences in the case of four investigated grammatical classes: derivate words, adverbs, homographs and conjunctions. An explicative hypothesis can be the one

that both categories of participants in the research scored low performances at the level of these grammatical classes, confirming the hypothesis of morphological classes instability in the case of the mentally disabled child (including the mild mental disabled child).

Conclusions

Comparative approach underlines and confirms the already mentioned aspects that are to be found in specialized literature, the fact that in the case of mental disabled children a plateau period in acquiring morphologic abilities can be registered, as well as a regression one. For confirming this hypothesis, in the present research significant differences between the two categories of participants are calculated for noun and pronoun. These two classes are ontogenetically the quickest acquired classes by the typically developed child. This research also refers to the necessity of a multidimensional approach of language during therapeutically and educative activities, stressing on its morphologic component as it has structural value for cognitive and linguistic development, in general. Thus, morphological abilities training and improving should be developed following a well structured curriculum according to the target group's development features. This curricular planning is extremely important despite the plateau and regression presence and it should represent a psycho-pedagogical priority, it being directly responsible, in the case of the grown up children with mental disability, for linguistic and cognitive development.

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