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Faculty of Humanities

THESIS SUMMARY

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THE DEVELOPMENT AND ASSESSMENT OF NARRATIVE SKILLS IN CHILDHOOD

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1 Structure of the thesis

The thesis begins by defining narrative competence and the concept of narrative used in the dissertation. The next part is the review of the main stages of language acquisition up to the preschool age. In relation to this process, I describe the specificities of the development of narrative competence and present those findings and observations from the national and international literature which led to the design and performance of the experiments presented in this paper.

The second part of the thesis presents the experiments carried out on this topic. First, an exploratory experiment and then two experiments examining the possibility of adapting international methods. The next part is a longitudinal study, which followed and measured the development of narrative competence of 12 children over three years. The cohesive tools and practices of children's storytelling are addressed in the fourth experiment. The last study focuses on how narrative skills are affected by verbal storytelling at home. In addition to the studies of analysing narratives, one of the thesis' chapters presents the results of a questionnaire completed by speech and language therapists about the practices related to storytelling used by them.

The thesis is concluded with a summary of the results and the possible benefits of the findings. This chapter presents the possible steps of the creation of a Hungarian narrative skills test, and show how the results have been already used for an educational website. I summarise future plans, possibilities and steps of the practical utilization related to the topic.

2 Introduction

Storytelling is a complex linguistic and cognitive task in which the speaker has to mobilise both their knowledge of the world and the given situation simultaneously and the speaker has to translate it into the appropriate linguistic form (Applebee, 1978; Hedburg-Westby, 1993). In the literature, narrative competence is defined along three components: knowledge of the general structure of narratives, the linguistic skills needed to create narratives, and the essential sociocultural experience.

The preschool years play a prominent role in children's storytelling skills. During this period, there are spectacular changes in the way children tell a fictional or personal story. Most children move from primitive narrative without structure and causality to independent creation of a logically well-constructed, complex narrative that follows chronology over three years. Changes in narrative construction are closely linked to age-appropriate cognitive, social and linguistic development (Applebee, 1978). One important area of speech development is the development of storytelling skills.

Observations suggest that the first stages in the development of narrative skills occur between the ages of 2-3 years (Fivush et al. 2006, McCabe et al. 2008).

The results of international researches are confirming the idea that distinct age-specific features can be identified in the narratives that children create. Applebee (1978) was the first to describe the the stages of narrative skills development. He identified six levels, from unstructured, loosely connected sentences to a real, structured narrative with connections. He estimated the successful construction of the first real narrative to occur at the age of 5-6 years.

In recent years, several international studies have focused on children's verbal narratives. The results of studies in the fields of psychology, speech and language therapy and linguistics have shown that, similar to the other areas of language development, there are age dependent stages in the development of story telling (Applebee, 1978; Stein-Glenn, 1979; Merritt-Liles, 1987; Bruner-Feldman-Kalmar-Renderer, 1993; Schneider-Dubé-Hayward, 2005).

Applebee (1978) identified six different stages in the way stories are structured, between the ages of 2 to 6 years. Stein and Glenn (1979) distinguished five developmental stages according to the number of story units (Table 1) included in the given story. The criteria defined by Stein and Glenn and the narrative stages described by Applebee are presented together as follows.

Table 1: The stages of narrative skills development (Applebee, Stein–Glenn)

Name of the narrative stage	Stages of the narrative skills
Heap Stories (2–2 and ½ year):	There is no obvious organisation between sentences. Stories at this level are mainly lists. The sentences and verbs are in the present tense. The main character is often not named.
Enumerations (2 and ½–3 years):	The story is structured around a central character or event, with connections made by association or similarity. There is no temporal or causal organization.
Simple narratives (3 years):	Stories are organized around a central theme, and characters are always named at this stage. The stories are also characterised by the typical features of characters, objects and places. At this stage of narrative skill, three story units are always included in the narrative. These are most often the setting, the main event that characterises the story and the resolution.
Chain narrative (4–5 years):	The narrative structure of chaining is characterised by a sequential, chain-like story structure. Stories are organised along causal, logical or temporal lines. At this level, the narrative contains at least 4 story units.
Real narrative (6 years):	This level extends the level of Chain narrative. In addition to the minimum of 4 story elements and the logical, causal links, the narratives include the characters' internal motivations and emotions. This makes the narrative real and complete. Of course, narrative skills develop further by age.

In addition to Applebee's (1978) model, several other theories and observations have been made describing the stages, the course and the characteristics of narrative structure and its developmental stages during the learning of the language acquisition. With age and as a result of the more confident use of the language and cognitive development, the narratives created by children show remarkable changes at the micro and macro levels as well.

Regarding microstructure, researchers tend to focus on productivity and grammatical complexity. Comparing productivity, differences were found between 5-6 and 7 years old children, but no significant differences were shown when comparing narratives of 4 and 5 years old children (Westerwelt et al., 2004). Justice and her colleagues analysed indicators of microstructure in narratives of 250 children aged between 5 to 12 years during the development process of the Narrative Assessment Protocol. Their results show an increase in all indicators of productivity with age (number of words, number of different words, number of utterances, average length of utterances, number of clauses, average length of clauses, number of conjunctions).

Changes in macrostructure are the most significant during the preschool years and during the transition from preschool to school. During this period, the number of story units in narratives, the amount of information and the usage of cohesive devices are also increasing. In their study with nearly 400 Canadian children, Schneider, Hayward and Dubé (2005) found that children between the age of 4 to 8 years showed a significant increase in the number of items assessing the macro structure of their narratives as they progressed in age.

In contrast to international practice, Hungarian studies have paid less attention to the assessment of narrative skills. In the narratives and spontaneous stories of preschool children, previous Hungarian linguistic researches had mainly examined active vocabulary, text length and grammatical structures. However, some studies have also analysed macro-structure of the stories that emerge. Studies focusing on the characteristics of story-telling in preschool have confirmed that even children starting school are challenged by independent verbal production.

In preschool, 3-year-old children progress from the initial few-word sentences to the creation of narratives. Storytelling is a complex skill that requires children to understand how to create relations and logical connections between sentences. When narrating a series of pictures, sentences are connected by conjunctions, linguistic elements. 4-5 year old children do not follow the required rules to create a coherent story yet, but some cohesive devices (e.g. the use of appropriate conjugation) may already appear in their stories. Ages 6-7 already tell a story in complex, well-constructed sentences, incorporating logical inferences and using cohesive devices (Schnell, 2016). Narratives can be analysed in terms of content or form. Macrostructural analysis focuses on the presence, order and structure of the content elements, while microstructural analysis focuses mainly on the formal and linguistic elements (Table 5-6).

In those studies where the main focus is on the analysis of the macro-structure of stories, the global structure of the stories, the presence of story grammar and the relationship of the larger elements to each other are specifically examined. These are the analyses and observations that

can be used to identify the developmental stages of narrative skill (see subsection 1.4 of this thesis for more details) (Slobin, 1994; Hickmann, 2003; Peterson-McCabe, 1983; Stein-Glenn, 1979). The macro-structure of stories also includes the conventional beginning and ending phrases (Justice et al, 2006). The most commonly used measures and analytical criteria related to macro-structure are shown in Table 6.

In case of studying microstructure, narratives are analysed in terms of their linguistic form.

The analysis can be approached from several aspects, such as productivity, complexity and language accuracy (Justice et al., 2006; Liles, Duffy et al., 1995). Productivity refers to the quantifiable elements produced in narratives (Leadholm-Miller, 1992). Measures of productivity can be the number of utterances, the number of words and the number of different communicative units (C-units) (Justice et al, 2006.) Indicators of syntactic complexity may include: average length of utterances, length and complexity of sentence structures used in narratives (Bishop-Donlan, 2005; Justice et al., 2006).

Although micro- and macrostructure are generally considered to be correlated, the relationship between the two levels is not clearly understood in different age groups (Košutar et al, 2022; Karmiloff-Smith, 2002). The literature suggests that macrostructure is not language specific, being less dependent on language skills and more dependent on cognitive skills (Berman et al., 2001; Paradis et al., 2017; Trabasso-Nickels, 1993).

Studies on relations and correlations between the macro- and microstructure of narratives show contradictory results. This is also due to the fact that different methodologies have been used to both to create and to analyse narratives. Experiments with atypical language development with language disorders may bring us closer to the understanding of the relationship between the two levels (Norbury-Bishop, 2003).

3 Aim of the research, questions and hypotheses

The dissertation presents a series of pilot studies in the age group of 3 to 7 years old children. The aim was to examine the narrative skills of native Hungarian children, to be able to adapt international methods and to prepare a Hungarian narrative competence measurement methodology. The aim of the study is to both describe the characteristics observed in the narratives and to test the methodological elements.

3.1 Research questions

1. What are the measurable characteristics of the Hungarian children's narrative competence?
2. . How do preschool children at different ages construct stories, how fluent and independent is their storytelling? What are the age differences in the micro- and macro-structure of the narratives created by preschool children?
3. Is there a correlation between measuring microstructural productivity and measuring macro-structure?
4. Can some of the indicators of the methodologies used in English be applied in Hungarian?
5. How do Hungarian preschool children and adults use cohesive devices in storytelling?
6. Is there a correlation between the children's narrative performance and the parents' knowledge of children's literature?

3.2 Research hypotheses

H1: As children get older, the narratives they create become more complex. Children in the older age group perform better on narrative skills tasks than children in the younger age groups.

H2: Creating stories becomes smoother and more independent with age. Older children create stories more independently than younger ones.

H3: There is a difference in performance between age groups in both macrostructure and microstructure measures.

H4: Productivity measures and macrostructure scores do not show a correlation. For longer stories, the narrative structure is not expected to be more structured.

H5: Elements of the international methodologies for the assessment of narrative structure can be used for the Hungarian language. A measurable difference in narrative structure scores is expected in the performance of different age groups.

H6: Age specific differences can be observed in the use of cohesive devices. There is a measurable change with age in the strategy of cohesion building.

H7: Reading stories at home has an impact on children's narrative skills. The higher the parent's score on the children's literature questionnaire, the higher the child's score on the narrative skills test.

4 Research material and methodology

The six experiments in this dissertation, conducted using different methodologies, include an analysis of 219 narratives, 195 of which are stories told by children aged between 3 to 7 years and 24 by the adult control group participating in the experiments. In total, 108 children participated in the experiments.

An overview of the methodology of the studies is presented in the following table. (Table 2)

Title of the study	Methodology	Measures and analyses
Explorative study	Telling stories from images	Self-sufficiency Productivity Coherence Lexical analyses
Applying the ENNI methodology in Hungarian	With the ENNI's pictures and instructions	Story Grammar Score Number of word Number of different words
The possibilities of adapting the Narrative Assessment Protocol methodology in Hungarian	With the NAP's pictures and following the instructions	Conventional structure Chronological structure of the story Story units
Longitudinal study	Telling stories from images	Information score Narrative stage
An investigation of coreference in children's storytelling	With the ENNI's pictures and instructions	Number of Utterances Mean Length of Utterances First Mentions Coreferential relations
The impact of the home language environment on the development of narrative skills - The children's literature checklist	With the NAP's pictures and following the instructions parent questionnaire	Narrative structure Knowledge of children's literature

Storytelling in Hungarian speech and language therapy practice		Questions on diganostics Questions on therapy
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5 Summary of research findings

The aim of the dissertation was to present the development of narrative skills and to introduce methodologies and methods of assessment that have not been used in Hungarian practice. The six studies in the thesis present the narrative development of the preschool age group using different aspects of analysis and methodologies.

In the first experiment (Chapter 3), I presented several aspects of the characteristics of preschool storytelling by comparing the performance of 3-4 years old children with that of 6-7 years old children. The dissertation includes three different studies (chapters 4, 5, 7) that examine the adaptability of international measures, the macrostructural and microstructural measures of the NAP and the ENNI, to the Hungarian language.

Parents and their children participated in a study to examine whether parents' knowledge of children's literature influences the storytelling of their children. In a longitudinal study (Chapter 6), I followed the changes in the narrative competence of 12 preschool children over three years. In the questionnaire study in Chapter Seven, I used responses from speech and language therapists to explore how storytelling is represented in speech and language therapy practice in Hungary.

In the following, I will examine the research hypotheses in the light of the results.

H1: As children get older, the narratives they create become more complex. Children in the older age group perform better on narrative skills tasks than children in the younger age groups. Both the longitudinal study (Chapter 6) and the experiments with adapting the two tests confirm that the performance of children in the 5-6 years olds can be said to produce longer and more complex stories across several measures. On both productivity and narrative structure, there was a difference between the performance of 5-6 year olds and other age groups.

H2: Creating stories becomes smoother and more independent with age. Older children create stories more independently than younger ones.

The second hypothesis was confirmed by the exploratory study. There seemed to be a significant difference in independence between the two age groups. According to the data of the study, more than half of the children in the groups of 3-4 years could not independently create and tell a verbal story. A total of three narratives from the in a group of 5-6 year olds fell into

the categories of 'not independent' or 'needing help', while the narratives from the group of 3-4 years olds fell into all of these categories.

H3: There is a difference in performance between age groups in both macrostructure and microstructure measures.

In all the experiments conducted, it was confirmed that the age specific features can be detected and demonstrated in the narratives of native Hungarian-speaking children that were assumed based on the data presented in literature.

H4: Productivity measures and macrostructure scores do not show a correlation. For longer stories, the narrative structure is not expected to be more structured.

The fourth hypothesis was partially confirmed in the ENNI adaptation experiment (Chapter 4), where correlation analysis on word count and NSzM (Story Grammar Score) by age group and by picture series confirmed that a clear relationship between story length and narrative structure complexity is not observed in all groups. In the 3-5 years group, there was no correlation between the two indicators for any of the image series, while in the group of university students there was a significant correlation between the two variables. The NSzM of the stories of the university student respondents showed the strongest correlation with the number of words. In the 6-7 years group, there was no correlation between the length of texts and the NSzM for the easy picture series. However, a strong correlation was observed for the difficult picture series.

H5: Elements of the international methodologies for the assessment of narrative structure can be used in Hungarian. A measurable difference in narrative structure scores is expected in the performance of different age groups.

All the experiments in this thesis used indicators that have been tested in international practice. The fifth hypothesis was confirmed, the tests carried out confirming that the macrostructure indicators in Hungarian can objectively and reliably show differences between different age groups.

H6: Age specific differences can be observed in the use of cohesive devices. There is a measurable change with age in the strategy of cohesion building.

The sixth hypothesis was partially confirmed by the experiment on coreference (Chapter 7). The results of the study showed a difference in the EE of the characters in the story and the

object in the story. When the new referent is introduced, both the definite article and the indefinite article are present in all age groups. The adult age group did not use either linguistic form significantly more than the other. As age progressed, there appeared to be individual consistency in the way speakers named the characters in the story.

H7: Reading stories at home has an impact on children's narrative skills. The higher the parent's score on the children's literature questionnaire, the higher the child's score on the narrative skills test.

The seventh hypothesis in the series of experiments was partially confirmed. In the experiment on this topic (Chapter 8), no correlation was found between the performance of three- to four-year-olds and their parents' knowledge of children's literature, while a strong correlation was found for the older age group.

In this dissertation, I have used several perspectives and methodologies to describe the characteristics of preschool storytelling. In the following, I summarize the results of the study by the lessons learned from the methodologies and by going through age specificity.

Thanks to the international methodological instructions tested in the studies (NAP, ENNI), it was possible to observe how the different instructions work in practice and what impact they have on the texts produced. In all cases, children were eager to participate, telling long and detailed stories. Compared to the first exploratory study, following international methodologies facilitated the process of recording the audio materials. The NSzM on narrative structure and the EE in the narrative cohesion are new indicators that can be adapted to better understand the narrative skills of native Hungarian-speaking children. The NSzM is an objective indicator that makes the story created from pictures measurable and comparable. Using the indicator, by breaking stories down into structural units, provides an opportunity to distinguish narratives created at different ages. The analysis of EEs can also contribute to the understanding of the regularities of coreferential relations in Hungarian children's language.

The studies of the narratives of three- and four-year-olds show that the usage of the traditional beginning and ending were rare. In the stories, the goals and outcomes were stated, but defining the problem and solution was still missing. The naming of the protagonist was also omitted in most cases at this age. There were few narratives in which the protagonist was precisely named and consistently referred to by the narrator. The chronology of events at this age was also mostly unmarked.

The presented age-specific features in the studies show a strong resemblance to the developmental stages described in the introduction. The narratives of the younger age group were simple narratives, while the stories of the older age group showed the characteristics of chaining and true narrative.

In the narratives of three and four year olds, the traditional beginning and ending twists were rare. In the stories, the goals and outcomes were named, but the formulation of the problem and the solution was still missing. The naming of the protagonist was also omitted in most cases at this age. There were few narratives in which the protagonist was precisely named and consistently referred to as such by the narrator. The chronology of events at this age was also mostly unmarked. Not at this age is it essential to know the appropriate vocabulary to tell the story, and storytelling in the 3-4 years group often meant listing the words on the picture line.

In the narratives of the five and six year olds, the traditional twists of beginning and ending appeared. They named goals and outcomes and had no difficulty in formulating problems and solutions. The protagonist was named in most cases and referred to in the narration of the story. In the six-year-olds, emotions were present in the stories. They expressed what the main character might be feeling in the situation. Six-year-olds also indicated the chronology of events in most stories.

However, knowing and activating the words to tell the story was not enough to make the words of 3-4 years olds come together to form stories. The majority of children at this age were already creating well-structured, coherent stories.

As the age progressed, the narrative structure became more and more detailed. Indicators of narrative skill also supported this claim. Children's development and performance is also determined by the language environment at home. Children with parents who had an outstanding knowledge of children's literature performed better on the storytelling task than children whose parents had less knowledge of current children's literature

6 The theses of the dissertation

1. The generated narratives became more complex with age. Older children performed better on narrative skill tasks than the younger ones. There was a difference in performance between 6-7 years olds and other age groups on both productivity and narrative structure.

2. Children between 6-7 years create stories more independently than younger children.

3. The age-specific characteristics of the narrative performance of Hungarian children are in line with the results of the international literature, both in terms of macro- and microstructural indicators.

4. At the age of 4 to 5 years, the measures of productivity (number of words, number of different words, number of utterances) and scores of macrostructure showed no correlation. At the age of 6 to 7 years, there was no correlation between the length of the narratives and the scores of the narrative structure for the easier picture series. However, a strong correlation was observed for the difficult picture series.

5. There was a measurable difference in narrative structure scores across age groups. Macrostructure measures in Hungarian also objectively and reliably show differences between age groups.

6. When the new referent is introduced, both the definite and indefinite are present in all age groups. Neither age group used one language form significantly more than the other. As age progressed, there was individual consistency in the way speakers named the characters in the story. As the speakers got older, they named the characters in the story with individual consistency.

7. Reading stories at home has an impact on the development of children's narrative skills. For five- to six-year-olds, there appeared to be a measurable correlation between their performance and their parents' knowledge of children's literature.

References

- Applebee, A. N. (1978). *The child's concept of story: Ages two to seventeen*. University of Chicago Press.
- Bishop, D. V. M., & Edmundson, A. (1987). Language-Impaired 4-Year-Olds: Distinguishing Transient from Persistent Impairment. *Journal of Speech and Hearing Disorders*, 52(2), Art. 2. <https://doi.org/10.1044/jshd.5202.156>
- Berman, A. M., Schwartz, S. J., Kurtines, W. M., & Berman, S. L. (2001). The process of exploration in identity formation: The role of style and competence. *Journal of Adolescence*, 24(4), 513–528. <https://doi.org/10.1006/jado.2001.0386>
- Bruner, J. S. (2002). *Acts of meaning* (10. print). Harvard Univ. Press.
- Hedberg, N. L., & Westby, C. E. (1993). *Analyzing storytelling skills: Theory to practice*. Communication Skill Builders.
- Justice, L. M., Bowles, R., Pence, K., & Gosse, C. (2010). A scalable tool for assessing children's language abilities within a narrative context: The NAP (Narrative Assessment Protocol). *Early Childhood Research Quarterly*, 25(2), Art. 2. <https://doi.org/10.1016/j.ecresq.2009.11.002>
- McCabe, A., & Rollins, P. R. (1994). Assessment of Preschool Narrative Skills. *American Journal of Speech-Language Pathology*, 3(1), Art. 1. <https://doi.org/10.1044/1058-0360.0301.45>
- Merritt, D. D., & Liles, B. Z. (1987). Story Grammar Ability in Children with and without Language Disorder: Story Generation, Story Retelling, and Story Comprehension. *Journal of Speech, Language, and Hearing Research*, 30(4), Art. 4. <https://doi.org/10.1044/jshr.3004.539>
- Norbury, C. F., & Bishop, D. V. M. (2003). Narrative skills of children with communication impairments. *International Journal of Language & Communication Disorders*, 38(3), Art. 3. <https://doi.org/10.1080/136820310000108133>
- Paradis, J., & Jia, R. (2017). Bilingual children's long-term outcomes in English as a second language: Language environment factors shape individual differences in catching up with monolinguals. *Developmental Science*, 20(1), e12433. <https://doi.org/10.1111/desc.12433>
- Schneider, P., & Dubé, R. V. (2005). Story Presentation Effects on Children's Retell Content. *American Journal of Speech-Language Pathology*, 14(1), 52–60. [https://doi.org/10.1044/1058-0360\(2005/007\)](https://doi.org/10.1044/1058-0360(2005/007))

- Schneider, P., & Hayward, D. (2010). Who does what to whom: Introducing of referents in children's storytelling from pictures. *Language, Speech and Hearing Services in Schools* 41: 459-473.
- Schnell Zsuzsanna (2016): *Az elme nyelve – Társalgás és nyelvfejlődés*. Akadémiai Kiadó, Budapest.
- Stein, N. L. – Policastro, M. (1984): The concept of a story: A comparison between children's and teachers' viewpoints. In: Mandl, H. – Stein, N. L. – Trabasso, T. (eds): *Learning and the comprehension of text*. Hillsdale, NJ: Lawrence Erlbaum Associates. 113–159.
- Westby, C. (1989): Assessing and remediating text comprehension problems. In: A. Kahmi, A. – Catts, H. (eds): *Reading disabilities: A developmental language and reading disabilities*. Boston. 259–324.