

Grammatical profile of three- to four-year-old Estonian children

Marika Padrik^{a1}, Merit Hallap^a, Signe Raudik^a

^a *University of Tartu, Institute of Education*

Summary

Introduction

Morphosyntactic skills are important marker of child language development. The acquisition of the Estonian language has mainly been studied by longitudinal case studies on the basis of the spontaneous speech data (Argus, 1995, 2004, 2007, 2008; Kapanen, 2014; Salo, 1994; Vihman & Vija, 2006). There are preliminary data on the early acquisition of syntax (Argus, 1995; Kapanen, 2014), Estonian case system (Argus, 2004, 2008; Hallap *et al.*, 2014; Salo, 1994) and verbal morphology (Argus, 2007, 2008; Salasoo, 1995; Salo, 1994).

About 10–15% of children are delayed in their early expressive language skills despite their normal nonverbal cognitive ability, adequate hearing, and typical personality development. The term *late talkers* is suggested to refer to these children (Desmarais *et al.*, 2008). Late talkers begin their syntax and morpheme acquisition processes at a later age than do typically developing children, and at the age of 3 to 4 they are still delayed in grammatical skills, but not deviant in their development (Rescorla, 2011; Rescorla *et al.*, 2000; Rescorla & Roberts, 2002). The data about language acquisition in case of Estonian late talkers is absent at the moment.

The aim of the study was to describe and compare grammatical profiles of three- to four-year-old Estonian children with typical and delayed speech development, as well as to identify markers that distinguish children at risk for delayed speech development.

The following hypotheses were set up for the research:

1. We assumed that four-year-old Estonian children used different simple and composite sentence structures (Huttenlocher *et al.*, 2002; Leiwo, 1993; Steffani, 2007). In the case of three-year-old children some tendencies typical of early syntax acquisition, such as the preliminary extending of a subject and a predicate as well as using two simple sentences

¹ Institute of Education, University of Tartu, Näituse 2, 50409 Tartu, Estonia; marika.padrik@ut.ee

- to convey basic verbal argument structure constructions (subject-verb-object) will occur (Kapanen, 2014).
2. We assumed that four-year-old children have acquired Estonian verbal and nominal inflections, i.e. use them correctly in 80% contexts, while three-year-olds coin word forms by analogy and still show production errors. We proposed that in Estonian as morphologically rich language morphophonemic and commission errors predominated over errors of omission (Hallap *et al.*, 2014; Vihman & Vija, 2006).
 3. We assumed that morphosyntactic skills of late talkers were significantly lower than those of children with typical language development, while the profile of skills was similar, i.e. both groups made errors in the same word forms (Rescorla & Roberts, 2002; Rescorla & Turner, 2015).
 4. We assumed that late talkers used more simple sentence structures than typically developing peers both at three and four years of age (Rescorla *et al.*, 2000) and that sentence repetition/imitation was a good marker for delayed speech development (Everitt *et al.*, 2013). Considering language specifics, we assumed that late talkers exhibited difficulties both in verbal and nominal morpheme use (Argus, 2008; Dressler, 2005; Lukács *et al.*, 2010), at the same time types of errors made by late talkers were similar to those made by children with typical development.

Method

This study reports age 3 (N=149) and 4 (N=186) syntax and morphology skills in typically developing Estonian monolingual children compared to late talkers (N=61) aged three to four. Grammatical skills were measured by tasks from Speech and Language Assessment Test for three to four years old Estonian children (Hallap *et al.*, in press), incl. structured elicitation and elicited imitation methods. Tasks assessed the children's use of eight case forms and 11 verb forms. Different simple and composite sentence structures were used in production and imitation tasks measuring syntactic skills.

Major results and discussion

Syntactic skills of typically developing three- to four-year-old children

The hypothesis that four-year-old typically developing children produce different simple and composite sentences was confirmed. The results of three-year-olds were significantly lower than those of four-year-olds. Simple

sentences including three obligatory arguments were the most difficult ones, while sentences with one adverbial (expressing place or means of action) were successfully produced. Sentence imitation was difficult in case of simple sentences with several arguments, sentences with recurrent parts, and composite sentences – all acquired at a later age (Argus, 1995; Stefani, 2007). It can be concluded that skills to extend the verb with several arguments is developing in three-year-olds. The frequent use of elliptical sentences and pronouns by three-year-olds refers to the strong connection with the context in sentence production in test situations. Thus, some tendencies of early syntax appeared in sentence production by three-year-olds.

Morphological skills of typically developing three- to four-year-old children

Moderate correlation between the results of tasks measuring syntactic and morphological skills confirms that those skills develop in parallel (Bittner *et al.*, 2003; Dressler, 2005). The results revealed that four-year-olds have acquired verbal and noun morphology (as far as studied morphemes are concerned) and the only form children experienced some difficulties with was past present, 2sg. Morphological skills of three-year-olds are still developing. Noteworthy is the fact that skills in using verbal inflection were better and more homogeneous than those of using nominal inflection. These results are in line with studies by Argus (2004, 2008) according to which inflectional morphology starts to develop in nominals later than in verbs. Past tense forms (except 1sg and 3sg) were more difficult to produce than present forms. However, four-year-olds have mastered the past tense category of verb forms (except for 2sg). The results clearly revealed that some noun forms were easier (allative, partitive sg, nominative pl and comitative sg) while others appeared to be more difficult (abessive, partitive pl and elative) to produce. Results confirm the conclusions from earlier studies (Argus, 2008; Dressler, 2005; Laalo, 2009) that the acquisition of morphology is influenced by word frequency, input, semantics and regularity of inflection.

Morphosyntactic profile of late talkers

Late talkers differed from typically developing children in all measures. Results revealed that the production of simple sentences by late talkers was only developing at the age of three and four. The pattern of errors made by late talkers was different from the one of typically developing peers: in sentence repetition tasks most of the sentences were elliptical and with errors

of morpheme use. In the sentence elicitation task, late talkers just named the action and object without actually producing the sentence. It was typical of late talkers to make several types of errors in producing one sentence. The results confirmed that sentence repetition was a useful marker for processing deficits of late talkers (Everitt *et al.*, 2013; Riches, 2012). Also, in nominal inflection the profile of late talkers was similar to the one of typically developing children. Late talkers successfully used those word forms that are acquired earlier and had difficulties with those that come to use later as abessive and partitive plural. Verbal morphology was not more difficult than nominal. One of the easiest forms to produce was the third singular present that is difficult for English and easy to Hungarian children (Lukács *et al.*, 2010). Apart from morphologically poor languages, in Estonian morphophonemic and commission errors dominated, compared to errors of omission. Still, late talkers used also some stems in lieu of inflectional affixes, that usually occur during the premorphological phase of morphology acquisition (Argus, 2007; Vihman & Vija, 2006). Thus, the suggestion that the pattern of acquisition by late talkers was similar to that of typical development but more protracted was confirmed (Rescorla & Roberts, 2002; Rescorla & Turner, 2015).

Results update current knowledge about the development of early grammatical skills by Estonian children. Several tendencies revealed in earlier case studies were confirmed by larger number of subjects in this study. Comparison of three children groups allows us to make some conclusions about the regularities of grammar development in Estonian children. Results enable specialists working with three- to four-year-old children to differentiate between typical and atypical features of grammar development. This in turn contributes to early identification and intervention.

Keywords: delayed language acquisition, typical language development, grammatical profile