Is a 'Snowman' a 'Man Made of Snow'? Morphology Teaching through Children's Stories

Marina Tzakosta, Chrysavgi Derzekou, Anastasia Gerontaki, Anna Vrachnaki & Niki Vrodorinaki

In-Text Citation: (Tzakosta,Derzekou, Gerontaki, Vrachnaki, & Vrodorinaki, 2020)
To Cite this Article: Tzakosta, M., Derzekou, Ch., Gerontaki, A., Vrachnaki, A., & Vrodorinaki, N. (2020). Is a 'Snowman' a 'Man Made of Snow'? Morphology Teaching through Children's Stories. *Multilingual Academic Journal of Education and Social Sciences*, *8(1),* 106-130.

Full Terms & Conditions of access and use can be found at
https://kwpublications.com/pages/detail/publication-ethics

Is a 'Snowman' a 'Man Made of Snow'? Morphology Teaching through Children's Stories

Marina Tzakosta, Chrysavgi Derzekou, Anastasia Gerontaki, Anna Vrachnaki & Niki Vrodorinaki

Faculty of Education, Department of Preschool Education, University of Crete, Greece

Abstract

The acquisition of word formation processes is considered to be the necessary prerequisite for the mastery of the morphology of the mother language as well as vocabulary development and vocabulary learning and teaching (cf. Nagy et al. 2006; Nagy & Herman 1987; Templeton 1989). In addition, the acquisition of the morphological component of a language makes predictions regarding the acquisition of other components, such as the syntax and/or the semantics. Aim of this paper is to describe the main axes of a program of teaching the morphology of Greek, more specifically, compounding, through children's stories and the results of its application in class. The main core of the program is a story accompanied by consolidation exercises. The results stemming from the application of the compounding story in Greek classes underline the fact that the experimental group scores as well as the control group with respect to the assimilation of compounding rules and principles. This entails that targeted children's stories provide an effective and fast way of teaching the morphology of Greek as a mother language.

Keywords: Word Formation Processes, Compounding, Compounding Principles, Children's Stories.

Introduction

The acquisition of word formation processes is considered to be the essential tool for the accurate use of the morphological component of a language, its vocabulary development and learning (cf. Nagy et al. 2006; Nagy & Herman, 1987; Templeton, 1989). This importance lies in the fact that the acquisition of morphology makes predictions regarding the acquisition of other grammatical components, such as the phonology, the syntax and the semantics of the language. Except for the acquisition of the morphophonological component, story reading and story retelling are thought to be suitable for oral and verbal language development in L1 (Brice-Heath, 1982; Connelly & Clandinin, 1990; Egan, 1989; Isbell et al. 2004; Morrow, 1985; Penno et al. 2002; Read, 2008) but also L2 (cf. Sinclair-Bell, 2002; Shyu, 2008; Tsou et al. 2006). However, none of the aforementioned studies target a specific vocabulary/ grammatical category.

In the present study, we explore how Greek word formation mechanisms are activated through a targeted teaching program whose main axe is a story made up of compound forms. In other words, we investigate the linguistic performance of native speakers with respect to a) the internal structure of compound forms as well as the relation holding between distinct compound constituents, b) the role of headedness and the linking vowel, c) the degree of compound constituent variation, i.e. the degree to which compound constituents positional alternation does not affect compound meaning. Compound mechanisms of Greek will be examined in combination to cross-linguistic factors affecting compound formation and which are strong enough to facilitate the production of compound forms. It is important to mention that, although we do not underestimate or undervalue the importance of linguistic input in compound formation, we will not take into consideration here.

The paper is organized as follows; section 2 discusses the central rules of Greek compounding as well as the main findings of research in Greek compounding. Section 3 presents the main axes of the Dyonomasia teaching material applied in class, while sections 4 and 5 discuss the findings from the implementation of Dyonomasia, the research tool used in this study. Finally, section 6 concludes the paper.

Compounding in Greek

Compound formation in Greek has been thoroughly analyzed at a theoretical level (cf. Anastasiadi-Simeonidi, 1983; 1986, 1996a, 1996b; Drachman & Malikouti-Drachman, 1994; Ralli, 1989, 1991, 1995, 2005, 2007; Nespor & Ralli, 1994, 1996; Revithiadou, 1996). However, the number of studies which explore a) Greek compounds' perception and cognitive processing (cf. Jarema et al. 1999; Kehayia et al. 1999; Tsiamas et al. 2015), b) the production of compound forms by native speakers who attend preschool and early primary school education (cf. Kostantzou et al. 2015; Tzakosta & Manola, 2012), c) learning Greek as a second language (cf. Tzakosta, 2009, 2010, 2011a, 2011b, 2017; Tzakosta & Mamadaki, 2013), d) the predictions for the teaching of compounding in primary and secondary education (cf. Gavriilidou, 2004; Gavriilidou & Efthimiou, 2001; Koufou & Tzakosta, 2015, 2017; Tzakosta & Koufou, 2017, 2020; Tzakosta & Manola, 2015) are not extensive.

The major morphological distinction among compound forms is the one which refers to lexical and morphosyntactic compounds (cf. Drachman & Malikouti-Drachman, 1994). In this approach, there are three types of compound forms, namely, [[stem + stem] + der. suffix] compounds (2a), [stem + word] (2b) and [word + word] (2c).

    (2) a. pali-*ó*-fil**os**   'good old friend – NOM. SG. MASC.'
    b. pali-*o*-fíλ**os**   'good old friend - NOM. SG. MASC.'
    6. peδí – θάvma   'whizz kid – NOM. SG. NEUT.'

Compounds of the [[stem + stem] + der. Suffix] and [word + word] types are lexical because they are one-word forms and are the product of word formation processes. On the other hand, compounds of the [word + word] type are morphosyntactic because they are the product of phrasal processes (cf. Malikouti-Drachman, 1995; Nespor & Ralli, 1994, 1996). As far as one-word lexical compounds are concerned, the only distinctive feature of the data in (2a) and (2b) is the position of stress. However, the data in (3) underline the fact that there are deeper differences.

More specifically, the compound head loses its lexical stress as well as its inflectional properties (inflectional ending) in (3a). In (3b) only stress assignment differs on the surface. However, the newly formed word in (3b) loses its inflectional ending – i and the new inflectional ending -i is assigned as the unmarked inflectional form (cf. Ralli, 2005). Finally, the head retains all its morphophonological characteristics in (3c). Therefore, the [[stem+ stem] + der. Suffix] compounds receive fully unmarked properties (cf. Ralli 2005, 2007).

> (3) a. spirt-*ó*-kout**o**   'match box – NOM. SG. NEUT.'
> b. spirt-*o*-koút**ι**   'match box – NOM. SG. NEUT.'
> c. spirt-*o*-kout**í**   'match box – NOM. SG. NEUT.'

The head in Greek is located at the right edge of the compound form, consequently, it is the second element of the compound word. Compound right headedness is a cross-linguistic bias (cf. Williams, 1981). Compound elements are distinguished, first, in coordinate and subordinate as far as the order of compound elements is concerned, and, second, in endocentric and exocentric, as far as the relation of compound elements is concerned (cf. Aronoff & Miller, 2001; Ralli, 2007). In coordinate and exocentric compounds there is no clear head and this is the reason why the position of compound elements may vary (4a, 4b), while in subordinate and endocentric compounds the head of the word defines the semantics of the newly formed word (4c, 4d) and the position of the compound constituents cannot vary. For this reason, (4d) is an ungrammatical, i.e. non-acceptable, word.

> (4) a. maher-o-píruna vs.   b. pirun-o-máhera   'cutlery – NOM. PL. NEUT.'
> c. spanak-ó-ρrizo   vs.   d. *riz-o-spánako   'spinach with rice – NOM. SG. NEUT.

Finally, the linking vowel, which mainly takes the shape of vocalic – o -, is thought of as a relic from ancient Greek (Anastasiadi-Simeonidi 1983; Ralli & Raftopoulou 1999; Ralli 2005, 2007). It appears across-the-board when the second compound constituent starts with a consonant (5a) and is absent when the second compound constituent starts with a vowel (5b). It always appears when it is stressed (5c).

> (5) a. xion-**ó**-nero   'sleet – NOM. SG. NEUT.'
> b. xion- ά – nθropos   'snowman – NOM. SG. MASC.'
> c. kocin-**ó**-aspros   'red and white – NOM. SG. MASC. ADJ.'

In an experimental task which tests the formation of existing and non-existing compound forms in Greek through two off-line questionnaire it has been shown that native speakers do not make errors in the formation of existing compounds (T1) with respect to the major compound properties discussed above, namely, compound internal structure, headedness and the linking vowel, while variation is attested in the formation of non-existing compounds (cf. Tzakosta, 2009). More specifically, adults native speakers, equally produce [[stem + stem] + der. Suffix] and [stem + stem] existing compounds, while they prefer to form [stem + word] non-existing compound types. Variability in the selection of compound type is also reported in Kalligiannaki & Tzakosta (2013); Tzakosta & Manola (2012). More specifically, Kalligiannaki & Tzakosta (2013)

show that preschool native speakers of Greek prefer [stem + word] rather than [[stem + stem] + der. Suffix] compounds, while Tzakosta & Manola (2012) claim that preschool and early primary school children prefer [[stem + stem] + der. Suffix]. This implies that these two compound types carry equal perceptual loads, therefore, they can be used interchangeably and without difference in meaning.

Data from Albanian, Bulgarian Romanian, Russian, Swedish and Turkish second language learners of Greek, on the other hand, exhibit patterns to those of native speakers, in principle, irrespective of whether Greek (L2) is typologically adjacent to the native language (L1) (Tzakosta, 2011a, b; Kalligiannaki & Tzakosta, 2013; Tzakosta & Koufou, 2017, 2020; Tzakosta & Mamadaki, 2013; Tzakosta, 2017). It has been discussed that compound perception and production are highly influence by compound formation rules (cf. Tzakosta, 2017). It has also been shown that the major properties of compound formation are important perceptual cues, which, in turn, drive production, and need to be the main axes of the teaching of compounding in order to avoid the activation mnemonic mechanisms and mnemonic knowledge. Moreover, the order of teaching is suggested to rely on the frequency of emergence of these cues (Kalligiannaki & Tzakosta, 2013; Tzakosta, 2011a, b; Tzakosta & Koufou, 2017, 2020; Tzakosta & Mamadaki, 2013; Tzakosta, 2017). In chapters 3 and 4 we test the applicability of this claim.

Dyonomasia & Akiarositsa: The Journeys of a Centipede in Grammarland
Aim of this chapter is to discuss the first findings stemming from the application of the teaching program which was created by Sinodi and Tzakosta (2014a, b) with the aim to target learning and teaching of specific word formation mechanisms. Sinodi and Tzakosta's work is based on the findings and claims made by Kalligiannaki & Tzakosta (2013); Tzakosta (2009, 2011a, 2011b, 2017); Tzakosta & Mamadaki (2013) according to which preference for specific forms is defined by mnemonic rather than word formation mechanisms in existing words, whereas, variation is attested in non-existing newly formed words. More specifically, Sinodi & Tzakosta (2014a, 2014b) produced two distinct teaching materials with which are intended to accurately evaluate the factors, the principles and the conditions which govern and, at the same time, facilitate language learning and teaching. The teaching materials considers the fundamental aim of the preschool curriculum, i.e. that teaching is expected to take place in a playful manner (cf. Read, 2008).

The two teaching materials created by Sinodi and Tzakosta (2014a, b) are called Dyonomasia and Aki-aros-tsa. Each of them describes and targets a morphological aspect of Greek. More specifically, Dyonomasia is a teaching tool for word compounding and Aki-aros-itsa is a teaching tool for word derivation. Compounding and derivation are two distinct "journeys of a centipede in Grammarland". Grammarland is supposed to be a land where a traveler can make several stops. These stops are the different grammatical phenomena. Both teaching materials are driven by the same (teaching) 'philosophy'. In other words, each program is based on a story made up of real and novel words in order to test the degree to which word formation is due to mnemonic strategies or the productive application of word formation rules.

The central heroes of the story are two little animals, Roussa, a centipede, and Noula, a kitten. Roussa and Noula become friends and they travel around Grammarland, they make new friends and enrich their linguistic knowledge. The story has been chosen as the best tool for the evaluation of language knowledge evaluation since it offers a context of meaningful communication. Story reading and story retelling are suitable for oral and verbal language

development (Egan, 1989; Isbell et al., 2004; Morrow, 1985). The story is accompanied by a guide addressed to parents and language instructors as well as a set of 10 suggested linguistic activities (see pictures 1 and 2). The linguistic activities take the shape of word matching, word combination, filling in the blanks, choosing the correct form. Dyonomasia and Akiarositsa are directed to children with an age range between 4 – 8 years who develop their skills in morphological and vocabulary development.

(1a) **asprokocina (aspr-o-kocina)**   sedonia
'White & red –ADJ.NOM.PL.NEUT.'   'bed sheets-NOM.PL.NEUT.'
(1b) **xrisoasimenies (xris-o-asimenies)** maksilarothikes
 'Gold & silver-ADJ.NOM.PL.FEM.'   'pillow cases-NOM.PL.FEM.'

Pic. 1. Dyonomasia story cover   **Pic. 2.** Dyonomasia's parts

Some Preliminary Findings
Dyonomasia was first implemented in two groups of monolingual native speakers of Greek. The first group (Group 1 – G1) consisted of 54 monolingual preschool children who are native speakers with typical language development, and the second group (Group 2 – G2) consisted of 27 monolingual preschool children who are native speakers with atypical development. Dyonomasia was implemented in three phases. During Phase 1, the kindergarten teacher first read the story aloud and then the whole class talked about compound and derived words, their definition and their characteristics. During Phase 2, children were asked to draw a scene from the story in which compound forms should be central (cf. pic 3-5). This way we would be able to test whether compound forms were actually correctly comprehended and perceived. Children then made a poster with their compound forms drawings (pic. 6). Finally, during Phase 3, children were asked to form compound forms by means of a picture naming task (pic. 7).
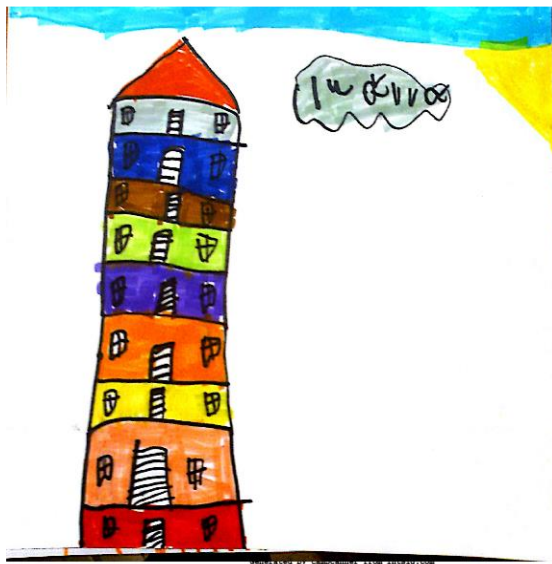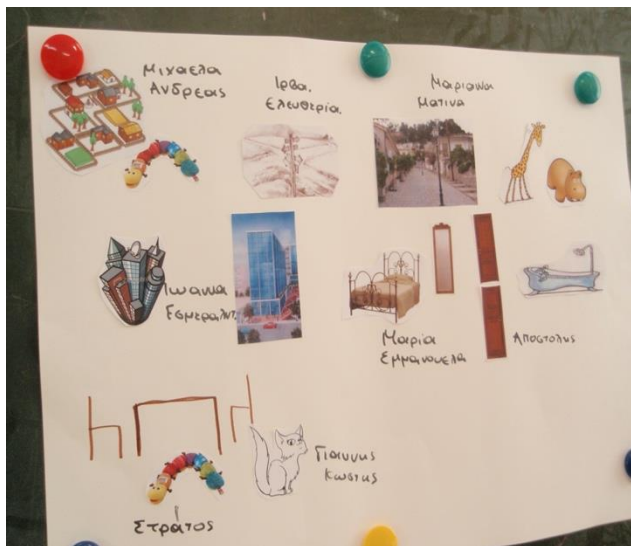
Pic 3. A drawing of the village of Dyonomasia
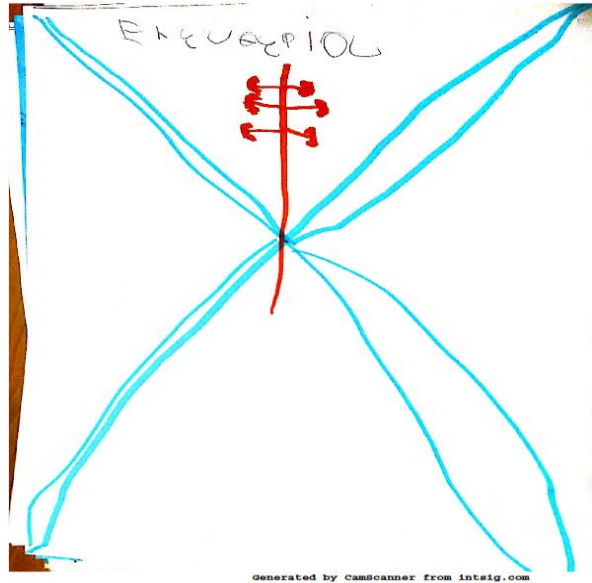
Pic. 4. A drawing of a crossroad

Pic 5. A drawing of a skyscraper

Pic 6. Poster made up of compound words

Pic. 7. Compound forms picture naming task

Tables 1 and 2 display the descriptive results of successful and unsuccessful compound formation during Phase 1 (table 1) and Phase 3 (table 2) for both groups, G1 and G2. It is obvious that the rate of unsuccessful compound formation is very high for both G1 and G2 during Phase 1. More specifically, 87,72% of the typically developing preschoolers and 86,2% of the atypically developing children fail to form compound words correctly. Only 12,28% of the typically developing children and 13,8% of the atypically developing children form compounds accurately.

Table 1. (Un)successful formation of compound words – phase 1

Phase 1	Compound words X	Compound words √
G1	87,72%	12,28%
G2	86,2%	13,8%

The picture is quite the opposite after Phase 3 of the application of Dyonomasia. More specifically, the rate of unsuccessfully formed compounds drops for both G1 (32%) and G2 (31%), while successfully formed compounds is quite satisfying (G1, 68% - G2, 69%). It is important to note that atypically developing children score better than typically developing ones. As discussed in earlier work of Tzakosta & Stavgiannoudaki (2013), atypically developing children play serious attention to rules, in that case, compound formation rules, and, as a result, they score slightly better than typically developing children. Such results highlight the role that rules may play in the language teaching process.

Table 2. (Un)successful formation of compound words - phase 3

Phase 3	Compound words X	Compound words √
G1	32%	68%
G2	31%	69%

The Present Study
The Tool
Dyonomasia is the teaching material also implemented in this study since its aim is the evaluation of the degree of accurate application of compounding rules. Dyonomasia tests the productive use of existing as well as non-existing compound forms. Dyonomasia's name is made of the fundamental rule of compounding; a compound form is word made up of at least two lexical constituents. Dyonomasia consists of three parts: a story, a set of 10 representative teaching/ practice activities and a guide directed to parents and educators. Given that the use of real words may be attributed to mnemonic strategies, the accurate formation of novel words certifies the acquisition and productive use of word formation rules.

The program was realized in three phases. In Phase 1, participants had to a) read the story, b) talk about its content, the derived words found in it and their properties, and, c) make a list of the derived forms of the story. In Phase 2, children participants were asked to a scene from the story (Pic. 8-11).
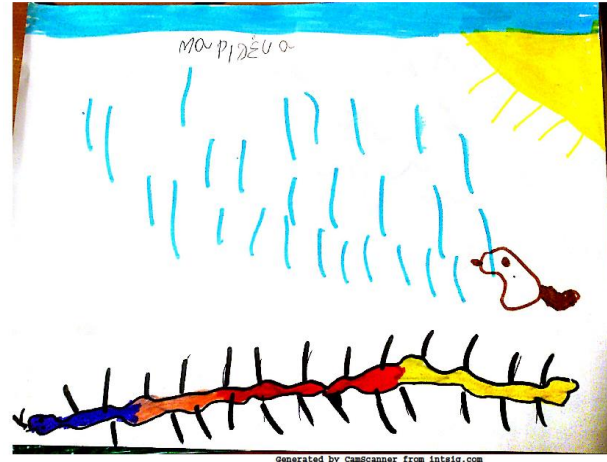

Pic. 8. A drawing of the village of Dyonomasia   **Pic. 9.** A drawing of a hotel
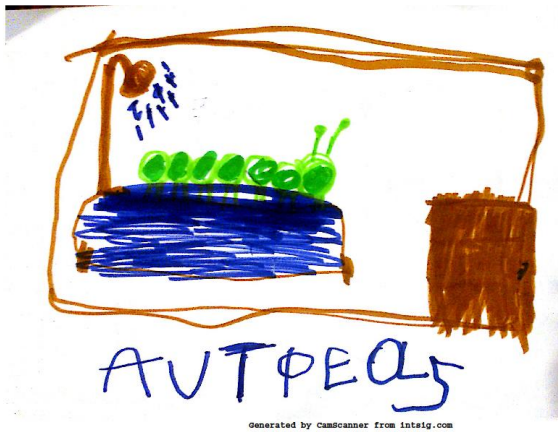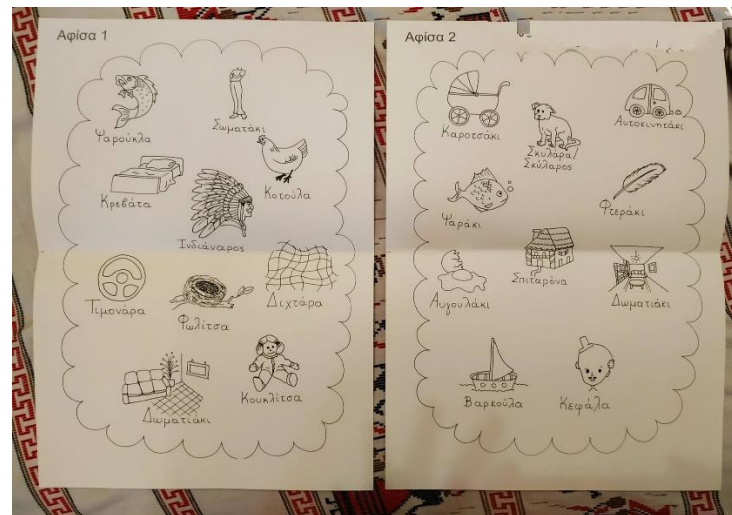
Pic. 10. A drawing of a centipede   Pic. 11. A drawing of a centipede

Finally, in Phase 3, participants took part in various linguistic activities which took the form of picture naming tasks, close test and word-matching (Pic. 12).

Pic. 12. A word-matching activity of Dyonomasia

The three intervention phases were preceded by a pre-intervention phase (Pre-IP) during which the participants were indirectly asked to recognize and form compound forms by answering questions like 'what is a snowman?' or 'or how is a man made of snow called?'. The three intervention phases were followed by a post-intervention phase (Post-IP) during which the EG2 participants were tested in the formation of derived forms through filling in a questionnaire. Participants were tested individually. Data were analyzed using the IBM SPSS statistics packet.

Participants
In this study, Dyonomasia was implemented in a group of 147 monolingual preschool children (age range: 5-6 years) (Experimental Group, EG), because we aimed to test the effect of the program before the critical period age limit (7 years) (cf. Lenneberg, 1967). A group of 40 adults

(age range 18-50 years) all of whom had attended tertiary education served as the control group (Control Group, CG). The CG participated only in the pre- IP.

Results and Discussion
In graphs 1-8 we present the results of compound formation and the accurate application of compounding rules by adults and children in the pre-IP. We observe that both adults and children do almost equally well in the formation of existing and non-existing compounds, though the scores are not very high for either group (Graphs 1 and 2). Scores are higher for existing compounds (52,56%, for adults, 47,66%, for children) compared to non-existing compounds (45,04%, for adults, 41,07%, for children). Higher scores of existing compounds are due to the activation of mnemonic mechanisms, while purely word formation mechanisms are activated in novel compounds (cf. Tzakosta, 2017 and more references therein). However, though comparable, scores for children and adults have different explanations. More specifically, adults seem to avoid the formation of compound words, while preschool children show satisfactory results in compound formation during the process of acquisition/ full development of the mother language (cf. Tzakosta & Manola, 2012). In this context, children's failure to produce compound words is also reported (7,90%).
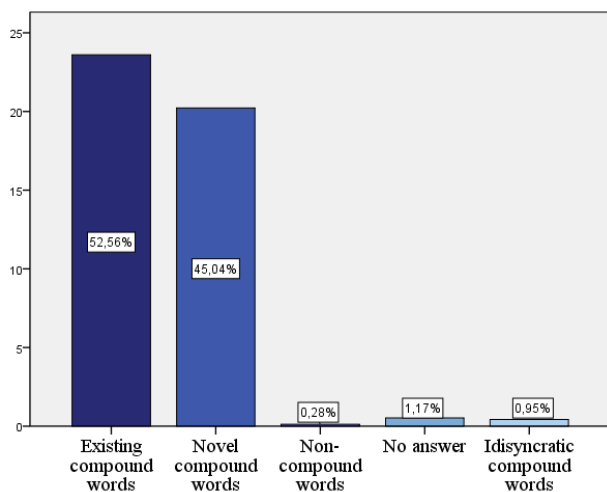

Graph 1. Pre-IP adults - compound formation
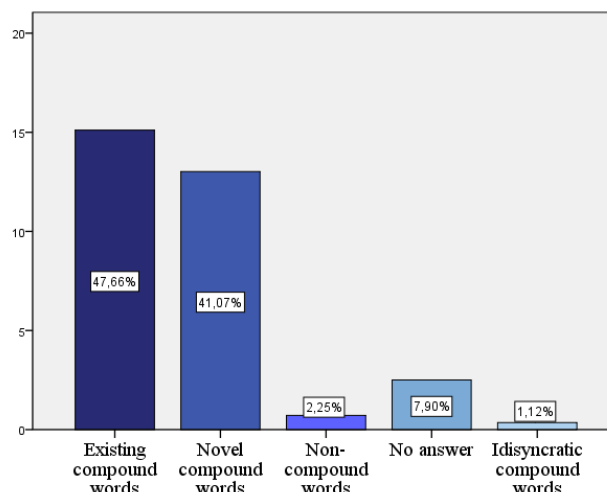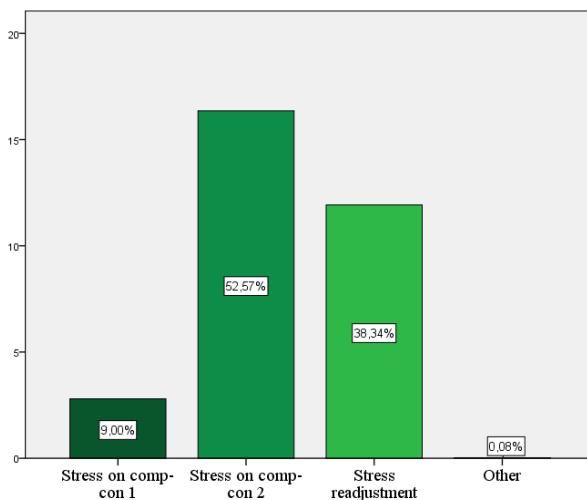

Graph 2. Pre-IP Child- compound formation

Graphs 3 and 4 illustrate adults' and children's preference for certain compound types. More specifically, adults seem to show slight preference for [[stem + stem] + der. Suffix]], like 'lemon-ó-dasos' forms (54,67%), in which stress is readjusted (in accordance with Tzakosta, 2009), while children more clearly prefer [stem + word] compounds (67,36%), like 'lemon-o-dásos' (in accordance with Tzakosta & Manola, 2012). This preference is expected for children, since children prefer to produce a form in which the morphophonological characteristics of at least one of the compound constituent, i.e. the second one which also happens to be the head of the word, are fully retained (this happens in the case of 'lemon-o-dásos').
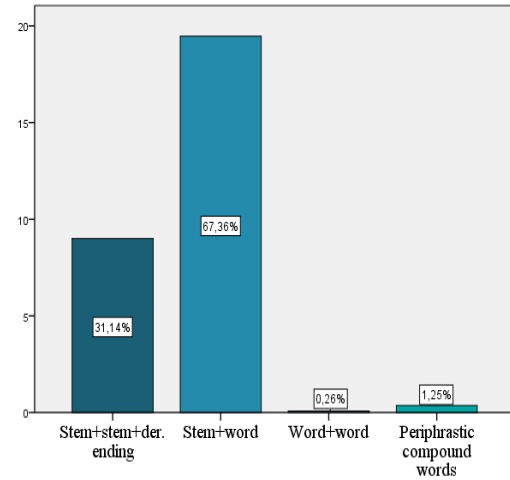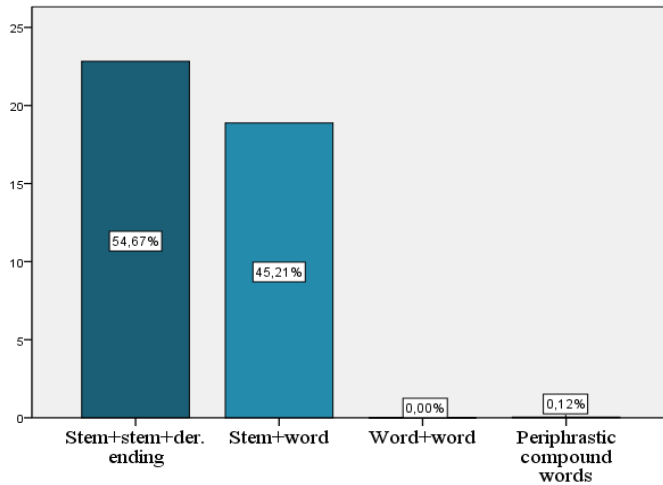
Graph 3. Pre-IP adults – compound types

Graph 4. Pre-IP children – compound types

The findings illustrated in graphs 3 and 4 are further supported by the graphs 5 and 6 in which it becomes more obvious that children tend to produce compound words in which the second constituent is stressed (75,61%, as opposed to 52,57%, for the adults). In other words, stress readjustment/ relocation is not preferred (38,34%, for adults, 16,76%, for children).
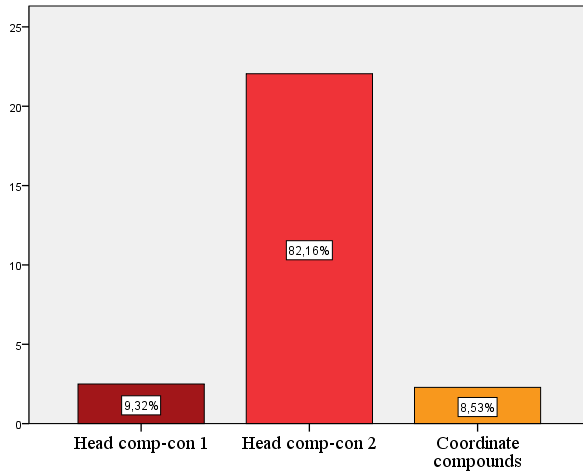

Graph 5. Pre – IP adults – compound stress
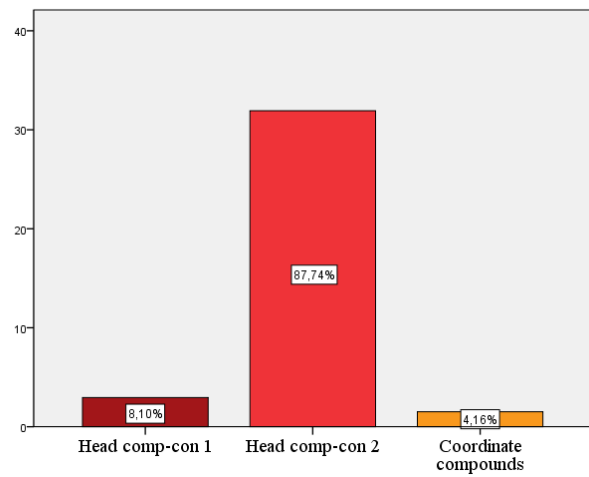
Graph 6. Pre – IP children – compound stress

With respect to headedness, both adults and children assign headedness to the right constituent of the compound form (87,74%, for adults, 82,16%, for children). Therefore, the rightmost constituent carries the semantic load of the compound form. In general, both the CG and the EG accurately implement the rule of right headedness. In addition, children produce more coordinate compounds compared to adults (4,16%, for adults, 8,53%, for children).

Graph 7. Pre- IP adults – compound heads

In the above as well as the following graphs, there is none which depicts the emergence of the linking vowel in compound forms. Linking vowels are used without exception in all produced forms. Total results and graphs for both CG and EG are provided in appendix 1.

Graphs 9-12 depict the pre-IP scores of the EG and CG with respect to the above tested categories, i.e. compound formation (Graph 9), compound types (Graph 10), compound stress (Graph 11) and compound headedness (Graph 12). Both groups' scores are in the same direction for the compound formation and the compound headedness categories (Graph 9, Graph 12). Children's scores are lower than those of the adults but this is expected since the process of acquisition of the mother language is not completed for children.
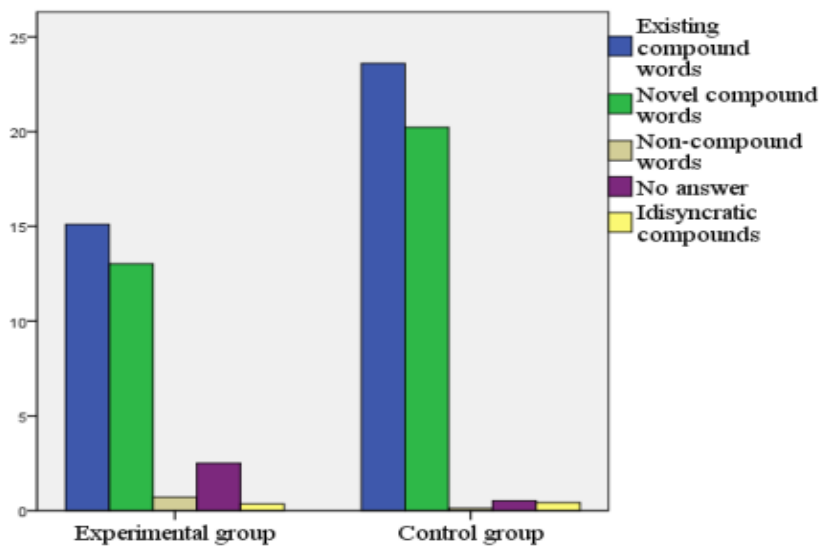
Graph 8. Comparative per group performance on compound forms
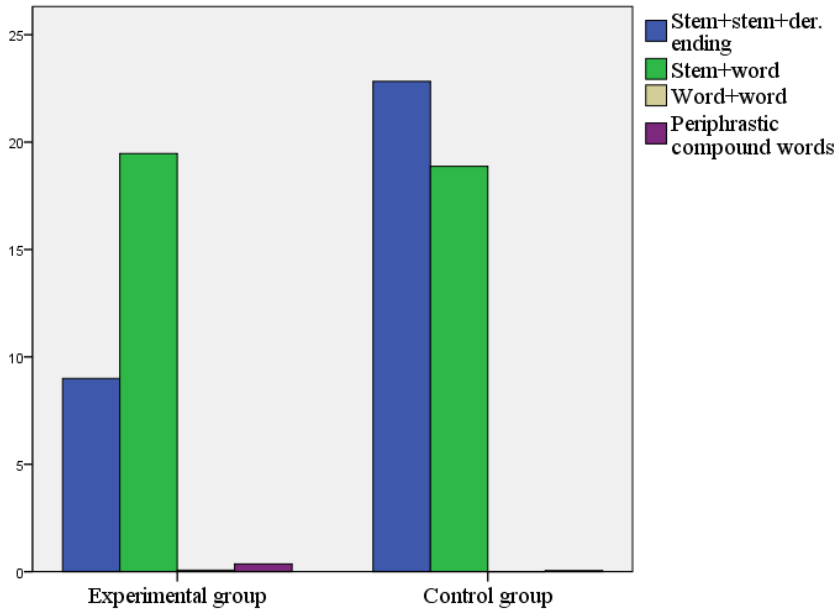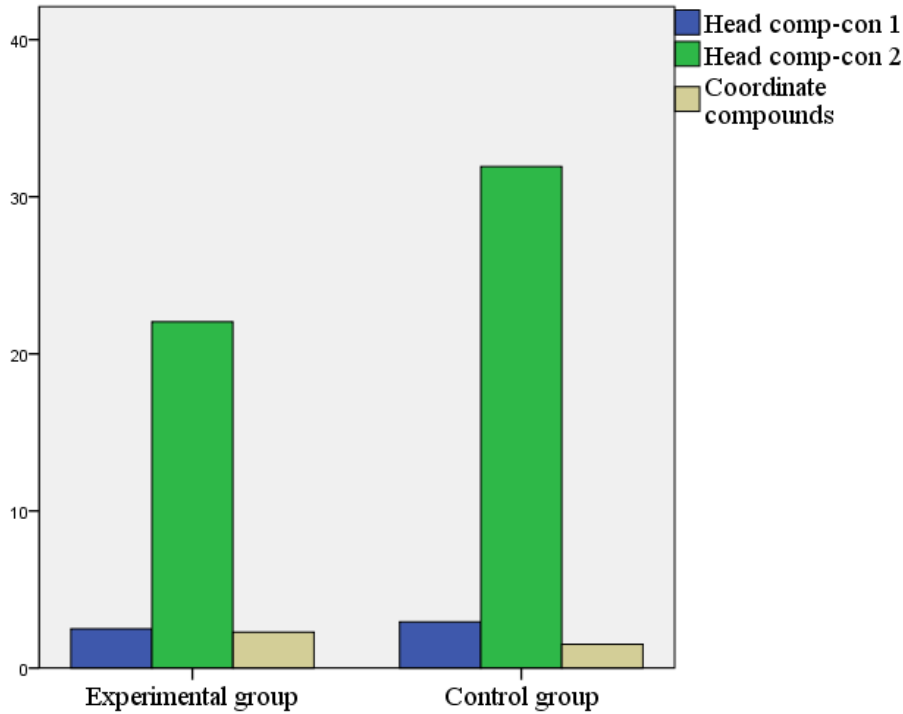
Graph 9. Comparative per group performance on compound types
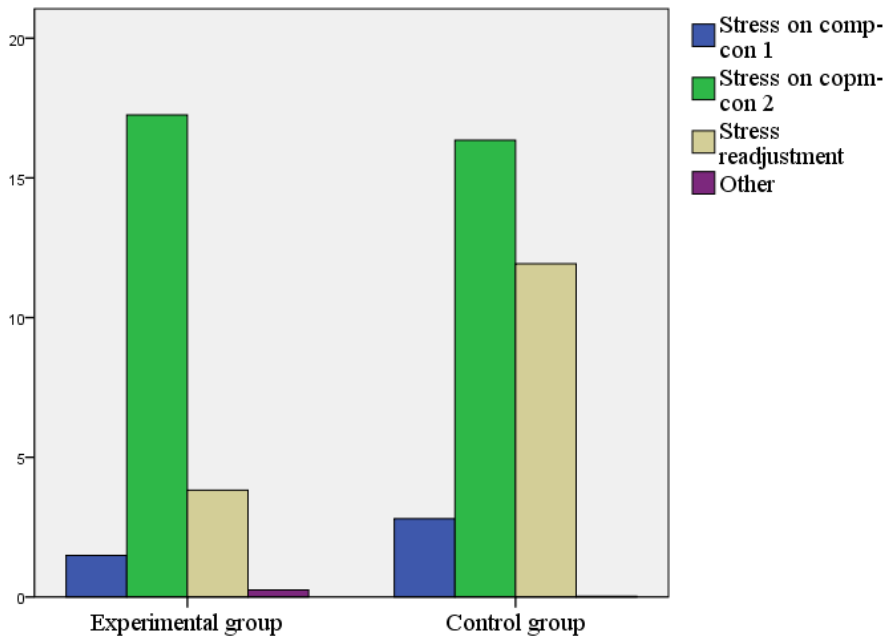
Graph 10. Comparative per group performance on compound stress

Graph 11. Comparative per group performance on compound heads

In Graphs 13-20, we compare the pre-IP and post-IP scores for EG. For the ease of reading, the pre-IP Graphs 2, 4, 6 and 8 are re-written as Graphs 13, 15, 17 and 19. It appears that there is improvement in EG's scores for most tested compound categories in the post-IP. More specifically, the scores for the formation of existing compounds (Graphs 13, 14) raise in the post-IP, even though children seem to be more hesitant in the formation of non-existing compounds after the intervention. However, it is important to note that the rate of idiosyncratic compounds is slightly higher in post-IP. We assume that this happens because children seek various ways of forming compound words. One type of idiosyncratic compounds is periphrastic compounds, like 'άnthropos apó xióni = a man made of snow' instead of 'xionάnthropos = snowman'.
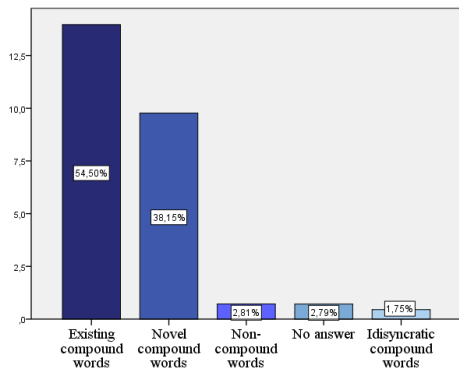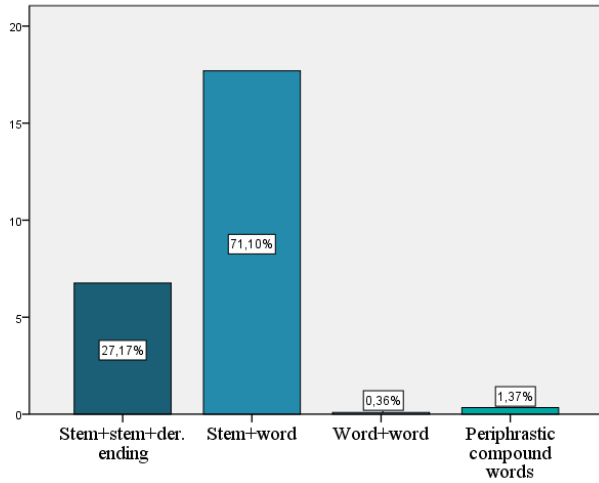

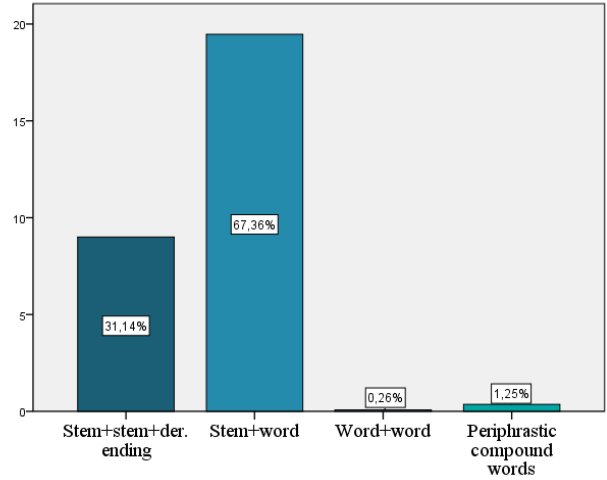Graph 12. Pre-interv. Child – compound formation formation
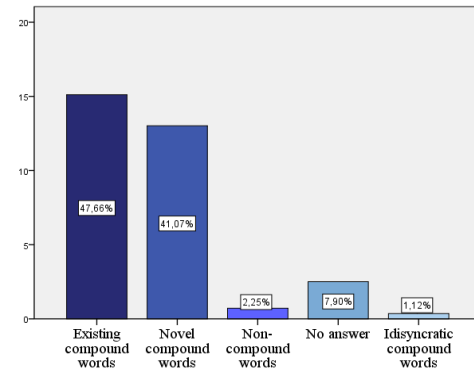
Graph 13. Post-interv. Child – compound formation

It appears that the teaching intervention did not improve children's ability to form [[stem + stem + deriv. suffix]] compounds (Graph 15), but it raised the score of [stem + word] compounds (Graph 16) which seem to carry a heavy perceptual load for preschool children (verifying Tzakosta & Manola's, 2012 findings).
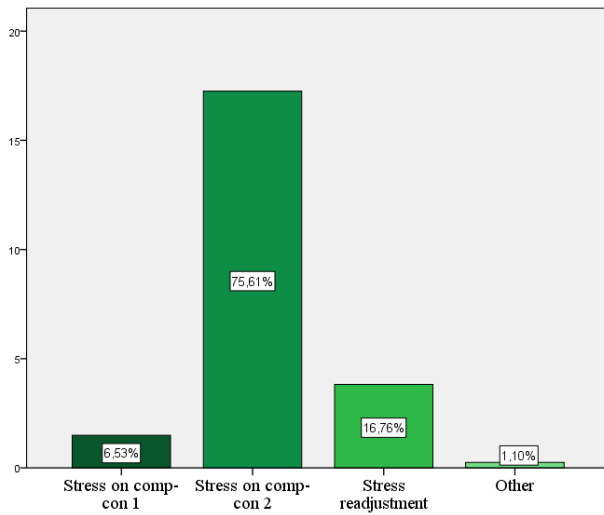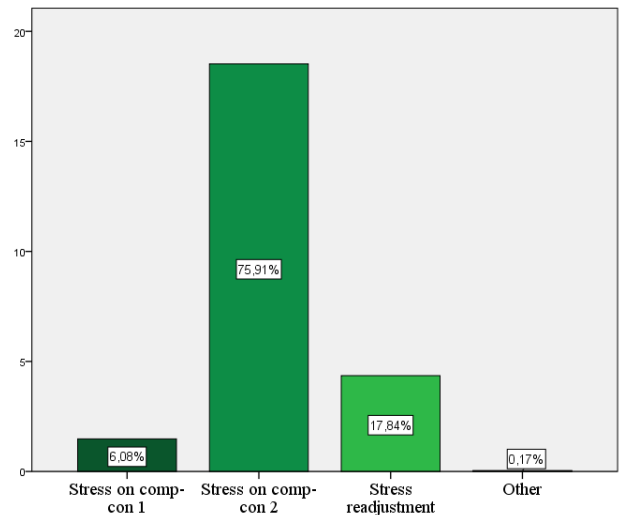
Graph 14. Pre-interv. Child compound types

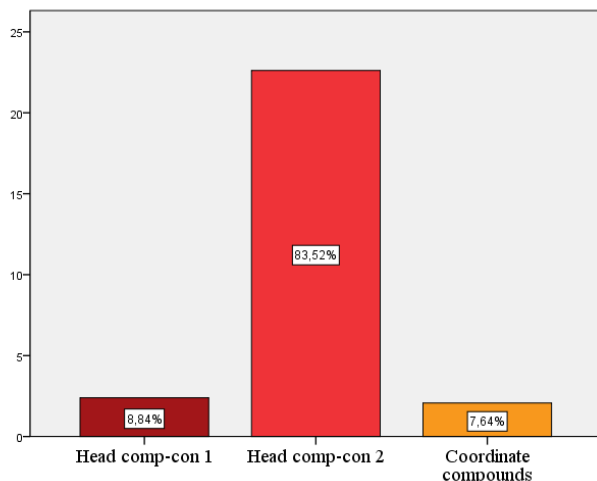Graph 15. Post-interv. Child compound types

Moreover, children's preference for right-headedness seems to be fixed but not improved with the teaching intervention (Graphs 16 - 17, 18 - 19).
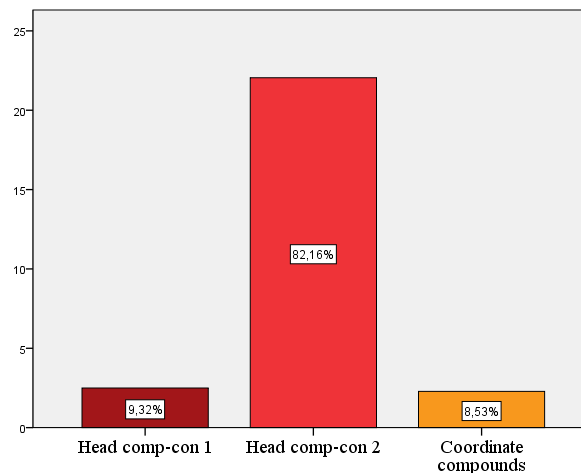
Graph 16. Pre-interv. Child compound stress stress

Graph 17. Post-interv. Child compound

Graph 18. Pre-interv. Child compound heads   Graph 19. Post-interv. Child compound heads

The above findings verify our initial hypotheses that a) targeted language teaching material raise children's learning interest and b) children's stories provide an effective way of language teaching. The results showed that targeted teaching materials successfully evaluate the level of the speakers' language knowledge, locate speakers' weaknesses and provide a satisfactory way to restore them.

Conclusions

In this paper we tested the results stemming from the application of a teaching program which places emphasis on the formation of compound forms. The results displayed that teaching materials which target specific grammatical phenomena get clear results with respect to the participants' understanding of the phenomena and the degree of rule learning which underlie the tested grammatical phenomena. Our findings further underline the fact that children's stories provide a natural and effective way of language teaching, in general, and teaching the morphology of Greek as L1, in particular. The presented teaching program highlights the importance of specialized and focused children's stories for the acquisition of the morphological component, vocabulary development and development of the mother tongue, in general.

References

Anastasiadi-Simeonidi, A. (1983) La composition en Grec Moderne d'un point de vue Diachronique. *Lalies* 2: 77- 90.

Anastasiadi-Simeonidi, A. (1986) Neology in Modern Greek [Η Νεολογία στην Κοινή Νεοελληνική]. Thessaloniki : *School of Philosophy Scientific Yearbook.*

Anastasiadi-Simeonidi, A. (1996a) Modern Greek Compounding [Η νεοελληνική σύνθεση]. In G. Katsimali & F. Kavoukopoulos (eds.), *Topics of Modern Greek: Teaching approach.* Rethymno; University of Crete, 97-120.

Anastasiadi-Simeonidi, A. (1996b) Teaching complex lexical units [Η **δ**ιδασκαλία των μη απλών λεξικών μονάδων]. In *Modern Greek as a foreign language.* Athens: Goulandri0Horn Foundation, 129-149.

Aronoff, M., & Rees-Miller, J. (eds.) (2001) *The Handbook of Linguistics.* Oxford: Blackwell.

Brice-Heath, Sh. (1982) 'What no bedtime story means: Narrative skills at home and school', *Language and Society* II: 49-76.

Connelly, F. M., & Clandinin, D. J. (1990) 'Stories of experience and narrative inquiry'. *Educational Researcher*, 19.5: 2-14.

Drachman, G., & Malikouti-Drachman, A. (1994) Stress and Greek compounding. *Phonologica* 1992: 55-64.

Egan, K. (1989) *Teaching as story telling. An alternative approach to teaching and curriculum in the elementary school*. Chicago: The University of Chicago Press.

Gavriilidou Z. (2004) Effect of a program for the production and comprehension of compound words by preschool children [Επίδραση προγράμματος παραγωγής και κατανόησης συνθέτων σε παιδιά προσχολικής ηλικίας]. *Studies in Greek Linguistics,* 25: 112-122.

Gavriilidou, Z., & Efthymiou, A. (2001) Teaching compound words in kindergarten [Διδακτική των συνθέτων στο Νηπιαγωγείο]. In E. Kourti (ed.). *Research in Preschool Education. Vol. A.* Athens: Typothito-Giorgos Dardanos. 17-29.

Isbell, R., Sobol, J., Lindauer, L., & Lowrance, A. (2004) 'The effect of storytelling and story reading on the oral language complexity and story comprehension of young children'. *Early Childhood Educational Journal*, 32.3: 157-163.

Jarema, G., Busson, C., Nikolova, R., Tsapkini, K., & Libben, G. (1999) Processing compounds: A cross-linguistic study. *Brain and Language* 68: 362-369.

Kalligiannaki, S., & Tzakosta, M. (2013) Common characteristics in compound formation: evidence from bilingual acquisition and L2 language learning. Στο N. Lavidas, Th. Alexiou & A.-M. Sougari (eds.), *Major Trends in Theoretical and Applied Linguistics: Selected Papers from the 20th International Symposium of Theoretical and Applied Linguistics*. London: Versita, 219-232.

Kehayia, E., Jarema, G., Tsapkini, K., Perlak, D., Ralli, A., & Kadzielawa, D. (1999) The role of morphological structure in the processing of compounds: The interface between linguistics and psycholinguistics. *Brain and Language,* 68 (1-2): 370-377.

Koufou, K.-Ei., & Tzakosta, M. (2015) The teaching of the morphological processes of derivation and compounding under the scope of school programs: a critical analysis [Η διδασκαλία των μορφολογικών διαδικασιών της παραγωγής και της σύνθεσης υπό το πρίσμα των ΑΠΣ: μια κριτική θεώρηση]. E- Proceedings of the *7th Scientific Conference of History of Education: «Which knowledge is more valuable?»*. Patras: University of Patras. http://eriande-elemedu.e-millescreations.com/ http://eriande-elemedu.e-millescreations.com/art/uploads/xenesglosses.pdf

Koufou, K.-E., & Tzakosta, M. (2017) Deverbal compounds in language teaching: 'weak links' and teaching proposals [Ρηματικά σύνθετα στη γλωσσική διδασκαλία: 'αδύναμοι κρίκοι' και προτάσεις διδακτικής]. In E. Agathopoulou, T. Danavassi & L. Efstathiadi (eds.), Selected Papers of the *22nd International Symposium of Theoretical and Applied Linguistics (ISTAL 22)*. School of English, Aristotle University of Thessaloniki. 316-338. e-ISSN: 2529-1114.

Konstantzou, K., Varlokosta, S., & Vlassopoulos, M. (2015) Compounding in Greek child language: evidence from typical development and specific language impairment. Paper presented at the *12ᵗʰ International Conference of Greek Linguistics* (ICGL12). Berlin Free University (September 2015).

Malikouti-Drachman, A. (1995) Prosodic Domains in Greek Compounding. Handout of Paper presented at the *2ⁿᵈ International Conference of Greek Linguistics* (ICGL2). Salzburg: University of Salzburg.

Morrow, L. M. (1985). 'Retelling stories: a strategy for improving young children's comprehension, concept of story structure and oral language complexity'. *The Elementary School Journal*, 85.5: 647-661.

Nagy, W. E., Berninger, V. W., & Abbott, R. D. (2006) 'Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students' *Journal of Educational Psychology*, 98.1, 134– 147.

Nagy, W. E., & Herman, P. A. (1987) 'Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction'. In M. McKeown & M. Curtis (Eds.), *The nature of vocabulary acquisition*. Hillsdale, NJ: Erlbaum, 19-35.

Nespor, M., & Ralli, A. (1994) Stress domains in Greek compounds: a case of Morphology phonology interaction. In *Themes of Greek Linguistics I*. Amsterdam & New York: John Benjamins, 201-208.

Nespor, M., and Ralli, A. (1996) Morphology-phonology interface: phonological domains in Greek compounds. *The Linguistic Review,* 13: 357-382.

Penno, J. F., Wilkinson, I. A. G., & Moore, D. W. (2002) 'Vocabulary acquisition from teacher explanation and repeated listening to stories: Do they overcome the Matthew Effect?' *Journal of Educational Psychology*, 94.1, 23-33.

Ralli, A. (1989) Deverbal compounds in Modern Greek [Τα ρηματικά σύνθετα της Νέας Ελληνικής]. *Studies in Greek Linguistics,* 10, 205-223.

Ralli, A. (1991) Lexical phrase: a topic of morphological interest [Λεξική φράση: αντικείμενο μορφολογικού ενδιαφέροντος]. *Studies in Greek Linguistics,* 12, 139-158.

Ralli, A. (1995) Relations of compounding and prefixation; the case of thematic roles in deverbal compounds [Σχέσεις σύνθεσης και προσφυματοποίησης: Η περίπτωση των θεματικών ρόλων στα ρηματικά σύνθετα]. *Studies in Greek Linguistics,* 16, 136-147.

Ralli, A. (2005) *Morphology [Μορφολογία].* Athens: Patakis.

Ralli, A. (2007) *Word compounding: A cross-linguistic Morphological Approach* [*Η Σύνθεση Λέξεων: Διαγλωσσική Μορφολογική Προσέγγιση*]. Athens: Patakis.

Ralli, A., & Raftopoulou, M. (1999) Compouidng as a diachronic phenomenon of word formation [Η σύνθεση ως διαχρονικό φαινόμενο σχηματισμού λέξεων]. *Studies in Greek Linguistics, 1*9, 389-403.

Read, C. (2008) 'Scaffolding children's learning through story and drama'*. IATEFL* 2, 6—9.

Revithiadou, A. (1996) Stress patterns and morphological structures in Greek nominal prefixation. *Studies on Greek Linguistics,* 16, 104-114.

Shyu, J.-T. (2008) 'Using stories to promote children's mandarin language development in kindergarten'. *ACIE Newsletter,* 1-8.

Sinclair-Bell, J. (2002) Narrative inquiry: more than just telling stories. TESOL Quarterly 36.2. 207-213.

Sinodi, E., & Tzakosta, M. (2014 a) *Dionomasia: The travels of a forty-legged bug in Grammarland* [*Δυονομασία: Τα ταξιδάκια μιας σαρανταποδαρούσας στη χώρα της γραμματικής*]. Chania: Glafki.

Sinodi, E., & Tzakosta, M. (2014 b) *Ακι-αροσ-ίτσα: Τα ταξιδάκια μιας σαρανταποδαρούσας στη χώρα της γραμματικής* [*Akiarositsa: The travels of a forty-legged bug in Grammarland*]. Chania: Glafki.

Templeton, S. (1989) 'Tacit and explicit knowledge of derivational morphology: foundations for a unified approach to spelling and vocabulary development in the intermediate grades and beyond'. *Reading Psychology*, 10, 233-253.

Tsiamas, A., Jarema, G., Kehayia, E., & Chilingaryan, G. (2015) Stress properties of Greek compounds. *The Canadian Journal of Linguistics*, 60 (1): 25-50.

Tsou, W., Wang, W., & Tzeng, J. (2006) 'Applying a multimedia storytelling website in foreign language learning'. *Computers and Education,* 47, 17-28.

Tzakosta, M. (2009) Perceptual ambiguities in the formation of Greek compounds by native speakers. In G.K. Giannakis, M. Baltazani, G.I. Xydopoulos & T. Tsagalidis (eds.), *E=Proceedings of the 8th International Conference of Greek Linguistics.* Ioannina: Department of Greek Philology, University of Ioannina, 545-557. http://www.linguist-uoi.gr/cd_web/arxiki_en.htm

Tzakosta, M. (2010) External and internal factors affecting compound formation in L2: the case of Dutch learners of Greek. *Studies in Greek Linguistics,* 30: 589-601.

Tzakosta, M. (2011a) L1 transfer in L2 Learning: compound forms in the speech of Turkish learners of Greek. In E. Kitis, E., N. Lavidas, N. Topintzi & T. Tsangalidis (eds.), *Selected papers from the 19th international symposium on theoretical and applied linguistics.* Thessaloniki: Monochromia, 459-468.

Tzakosta, M. (2011b) L1 transfer in L2 word formation. E-Proceedings of the *9th International Conference of Greek Linguistics.* Chicago: University of Chicago, 416-427. http://www.ling.ohio-state.edu/ICGL/proceedings/

Tzakosta, M. (2017) Word compounding by native speakers and second language learners of Greek: cues for L2 proficiency/ bilingualism [Σύνθεση λέξεων από φυσικούς και αλλόγλωσσους ομιλητές της ελληνικής: δείκτες γλωσσομάθειας/ διγλωσσίας]. *Sciences of Education, 5.*1, 133-158.

Tzakosta, M., & Koufou, K.-I. (2017) "Looking for an identity": compound formation in the speech of Albanian learners of Greek. Στο M. Hirakawa, J. Matthews, K. Otaki, N. Snape & M. Umeda (eds.), Πρακτικά του *Pacific Second Language Research forum 2016.* Chuo University: The Japan Second Language Association. 225-230.

Tzakosta, M., & Koufou, K.-Ei. (2020) Who is a proficient second language learner? Subtle characteristics of compound formation in the speech of Albanian learners of Greek. *Sciences of Education* 8.1, 171-191.

Tzakosta, M., & Mamadaki, M. (2013) Compound formation in L2 learning: the case of Bulgarian, Romanian and Russian learners of Greek. Στο Z. Gavriilidou, A. Efthimiou, E. Thomadakis & P. Kambakis-Vougiouklis (eds.), *Selected papers of the 10th ICGL,* Komotini: Democritus University of Thrace, 78-583.

Tzakosta, M. M., & Manola, D. (2012) Perception and production of compound forms by preschool children: teaching proposals [Κατανόηση και παραγωγή συνθέτων από παιδιά

προσχολικής ηλικίας: διδακτικές προεκτάσεις]. In K.D. Malafantis, N. Andreadakis, D. Karagiorgos, G. Manolitsis & V. Oikonomidis (eds.), *Proceedings of the 7th Conference of the Pedagogical Society of Greece. Vol. B.* Athens: Diadrasi, 1119-1130.

Tzakosta, M., & Stavgiannoudaki, A. (2013) Cluster production in Greek SLI children: a typological account of two-member consonant clusters. In S. Stavrakaki, M. Lalioti & P. Kanstantinopoulou (eds.). Advances in Language Acquisition. Cambridge: Cambridge Scholars Publishing. 454-463.

Williams, E. (1981). On the notions "lexically related" and "head of the word". *Linguistic Inquiry* 12, 245-274.

Appendix 1 – Total Results

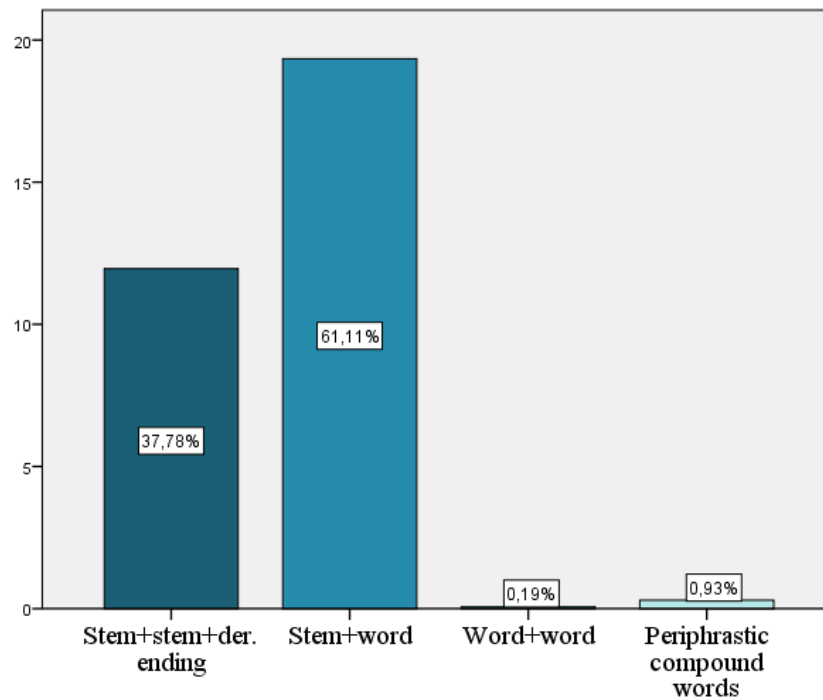|	N	Min	Max	Sum	Mean	Std. Deviation
Existing compound words	187	0	45	3165	16,93	11,270
Novel compound words	187	0	71	2723	14,56	15,520
Non-compound words	187	0	33	110	,59	2,701
No answer	187	0	47	389	2,08	6,229
Idisyncratic compound words	187	0	15	69	,37	1,406
Valid N (listwise)	187					

Table 1.1. Pre – intervention phase performance on compound forms (all participants)
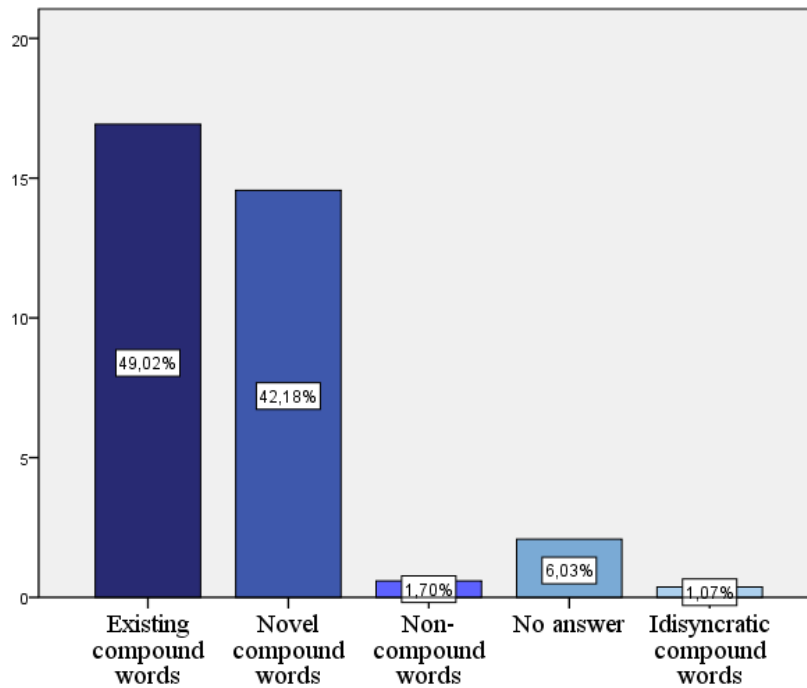
Graph 1.1. Pre – intervention phase performance of compound forms (all participants %)

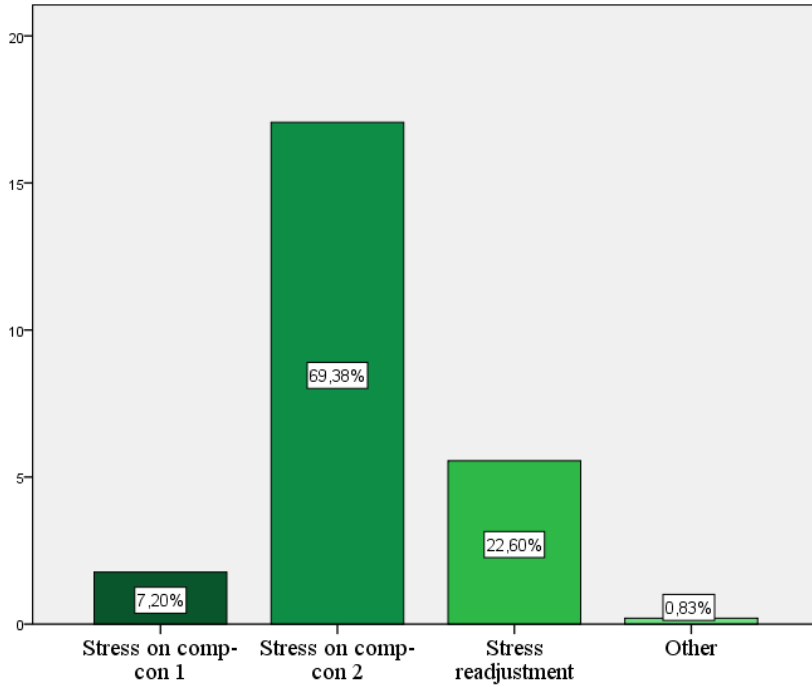|	N	Min	Max	Sum	Mean	Std. Deviation
Stem+stem+der. Ending	187	0	53	2236	11,96	13,086
Stem+word	187	0	79	3617	19,34	15,079
Word+word	187	0	4	11	,06	,404
Periphrastic compound words	187	0	34	55	,29	2,572
Valid N (listwise)	187					

Table 1.2. Pre-intervention performance on compound types (all participants)

Graph 1.2. Pre–intervention phase performance on compound types (all participants %)

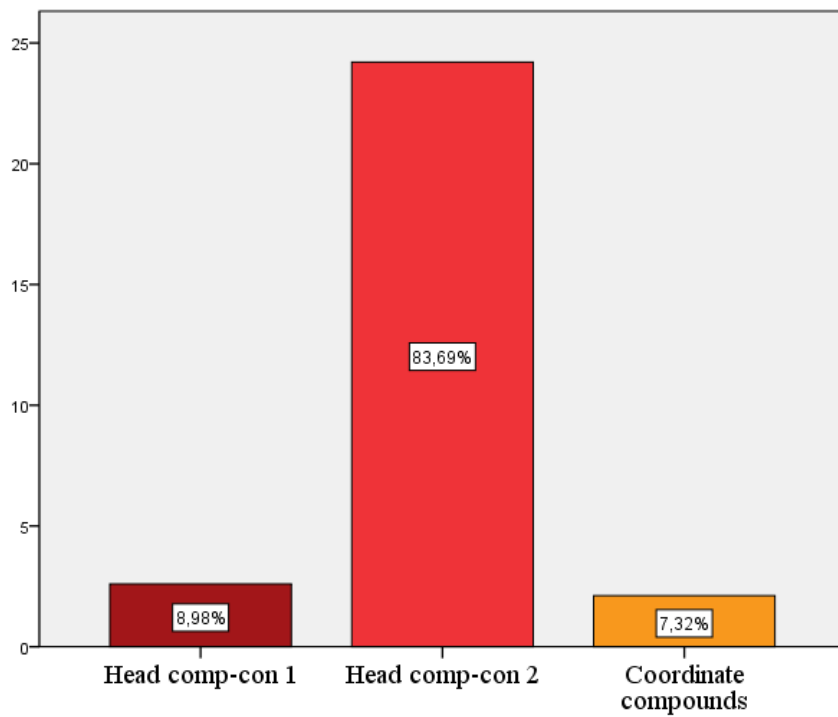|	N	Min	Max	Sum	Mean	Std. Deviation
Stress on comp-con 1	187	0	17	331	1,77	3,182
Stress on comp-con 2	187	0	79	3190	17,06	14,252
Stress readjustment	187	0	38	1039	5,56	8,965
Other	187	0	33	38	,20	2,417
Valid N (listwise)	187					

Table 1.3. Pre-intervention phase performance on compound stress (all participants)

Graph 1.3. Pre-intervention phase – compound stress (all participants %)

	N	Min	Max	Sum	Mean	Std. Deviation
Head comp-con 1	187	0	18	439	2,60	2,776
Head comp-con 2	187	1	64	4091	24,21	16,419
Coordinate compounds	187	0	34	358	2,12	5,220
Valid N (listwise)	187					

Table 1.4. Pre-intervention phase performance on compound heads (all participants)

Graph 1.4. Pre-intervention phase performance on compound heads (all participants %)