

# THE ROLE OF LITERACY IN VOCABULARY & MORPHOSYNTACTIC DEVELOPMENT IN ARABIC-SPEAKING REFUGEES & MIGRANTS

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## ABSTRACT

The present study aims to investigate the role of literacy in the acquisition of vocabulary (i.e. both receptive and expressive) and morphosyntax in refugee and migrant adolescents. Previous studies have shown that vocabulary and morphosyntax are strongly correlated; while others claim that they are subjected to different mechanisms. Recent studies in bilingual children have found that lexical knowledge and literacy boost the acquisition of morphosyntax. In the present study participated ten refugee and migrant adolescents. Half of them received literacy support in Greek through schooling (i.e. the control group); while the other half received additional literacy support (two hours per week) attending teaching interventions (i.e. the experimental group). The methodology used was the following: the participants were tested by means of pre-tests, then two-month teaching interventions were implemented and post-tests were administered. Both tests and teaching interventions examined vocabulary and morphosyntactic features. The results have shown that the control group had better scores on receptive vocabulary during the administration of the pre-tests; while this difference was disappeared after the teaching interventions. No other differences were found between the groups. The findings suggest that in so short time span (2 months) it is difficult to observe significant results in expressive skills; nonetheless literacy can positively affect receptive vocabulary; while the expressive skills (vocabulary and morphosyntax) need more time. Finally, correlations between morphosyntax and receptive and expressive vocabulary were detected confirming the strong relation of the two domains.

**Keywords:** Literacy, vocabulary, morphosyntax, refugees/migrants.

## INTRODUCTION

Language consists of two major domains, the *Mental Lexicon* and the *Grammar* (Pinker & Ullman 2002). Each of these domains is assumed to depend on different learning mechanisms (Garraffa 2017; Paradis & Genesee 1996). Recent studies, however, have shown that lexical development is linked to morphosyntactic abilities and literacy (Perfetti 1985) both in monolingual (Hemphill & Tivnan 2008; Hoff 2009) and in bilingual children (Nassaji 2006). Moreover, research in monolingual children supports that poor vocabulary development leads to incomplete development of morphosyntax and literacy (Swanson et al. 2008; Lee 2011) and affects children's performance in school (Duff et al. 2015; Rescorla 2005; Ricketts et al. 2007). Similar studies in bilingual children have found that vocabulary correlates with the development of morphosyntax (Conboy & Thal 2006; Parra et al. 2011).

Regarding Greek language, current research in bilingual children suggests that lexical performance influences the morphosyntactic abilities, the level of literacy and school performance (Dosi 2016; Dosi & Papadopoulou 2019; Dosi, Papadopoulou & Tsimpli 2016).

In addition, migrant/refugee children's difficulties with literacy in Greek and school vocabulary affect their school performance (Papadopoulou & Agathopoulou 2017; Tzevelekou et al. 2013). In general, bilingual children's lexical development lag behind compared to that of monolinguals (Bialystok et al. 2010; Marchman et al. 2010; Patterson 2004). One factor influencing vocabulary development in bilingual children is socio-economic status (SES) (Gathercole et al. 2015; Hoff 2006). More specifically, children with higher SES have wider vocabulary compared to children with lower SES. An appropriate teaching intervention, however, can counterbalance the low SES (Beck & McKeown 2007).

Therefore, more recent studies focus on identifying effective vocabulary teaching methods in the second language (L2) (Alemi & Tayebi 2011; Singleton 1999). Some of the most well-known vocabulary teaching methods are words to be accompanied by their translation equivalents, or by pictures depicting the exact item or action, or by synonyms (in their first language, L1). Other methods include the teaching of word families, the teaching of the word internal structure (stems and affixes) and the teaching of words by means of their definition in the L1 (Ekiaka Nzai & Reyna 2014; Nation 2001; Schmitt 2007). Learners are often instructed to guess the meaning of the word taking into account the context (Mediha & Erisa 2014) or to write a sentence using the new word (Ekiaka Nzai & Reyna 2014). More recently developed instructional methods attempt to involve learners to more visual-kinetic activities, such as the use of videos (Bal-Gezegina 2014; Katwibun 2014), cardboard games (Ekiaka Nzai & Reyna 2014) and especially designed educational web sites (Yip & Kwan 2006).

## **LITERATURE REVIEW**

Mental Lexicon and Grammar form the two main language domains. Each of these domains is assumed to depend on different learning mechanisms. In particular, the Mental Lexicon is stored in the declarative memory, while Grammar, is represented in the procedural memory (Garraffa 2017; Paradis & Genesee 1996). Previous studies, however, have shown that these two mechanisms are not so conflicting with each other and that lexical development is associated with morphosyntactic abilities as well as with the level of literacy (Perfetti 1985), both in monolingual (Hemphill & Tivnan 2008; Hoff 2009) and bilingual children (Nassaji 2006). More specifically, research in monolingual children claims that limited vocabulary development leads to incomplete development of morphosyntax and literacy (Swanson et al., 2008; Lee 2011) which also affects school performance (Duff et al. 2015; Rescorla 2005; Rickets et al. 2007). Similar studies in bilingual children have shown that vocabulary is positively correlated with the development of morphosyntax (Conboy & Thal 2006; Parra et al. 2011).

Studies in bilingual children have shown that vocabulary knowledge and literacy affect morphosyntactic abilities (Dosi 2016; Dosi & Papadopoulou 2019; Dosi et al., 2016). In addition, migrant and refugee children's difficulties with literacy in Greek and school vocabulary have an impact on their school performance (Papadopoulou & Agathopoulou 2017; Tzevelekou et al. 2013). Therefore, there seems to be a strong correlation among vocabulary, morphosyntax and literacy. Additionally, SES seems to affect vocabulary development in bilingual children (Gathercole et al., 2015). The SES, in most of the studies, refers to maternal education and denotes that the child has more chances to be exposed to more words and low frequent words. Nevertheless, other studies suggest that teaching interventions can counterbalance the low SES (Beck & McKeown, 2007). The aforementioned findings are of great importance, especially when it comes to migrant/refugee children, who usually have

rather low SES and are less privileged in that they have fewer educational opportunities to develop their language and literacy skills.

Consequently, researchers focus on vocabulary teaching in L2 in a more effective way (Alemi & Tayebi 2011; Singleton 1999) and several teaching methods have been proposed. Some of the most well-known ones are words to be accompanied by their translation equivalents, or by pictures depicting the exact item or action, or by synonyms in the L2. Moreover, teaching of word families, and teaching with the aid of morphosyntax (i.e. teaching the internal word structure, e.g. stems and affixes). Definitions have also been used in vocabulary teaching in L2 (Ekiaka Nzai & Reyna 2014; Nation 2001; Schmitt, 2007). In recent studies, learners are often instructed to find the meaning of the word relying on the context (Mediha & Erisa 2014), in terms of comprehension; or to write a sentence using the word that is being learned, in terms of production (Ekiaka Nzai & Reyna 2014). More recent methods include visual-kinetic activities (Bal-Gezegina 2014; Ekiaka Nzai & Reyna 2014; Katwibun 2014).

Regarding the previous findings and gaps, it is challenging to examine the efficiency of teaching interventions in a vulnerable group, such as refugee and migrant children, who are under-investigated with respect to their language and literacy profiles. Additionally, the development of language and literacy skills have not been so far analyzed in refugee and migrant children who learn Greek as a second language, while very few studies have looked at teaching intervention effects on bilingual development (Robinson & Sorace 2018).

## **METHODOLOGY**

### **Participants**

In the present study ten typically developing Arabic-speaking migrant/refugee adolescents aged 15-18 years, who lived in Mitilini (Greece), took part. They were divided into two groups; five of them formed the control group who received literacy support in Greek through schooling; while the other five received additional literacy support (by means of teaching interventions two hours per week) and formed the experimental group. All participants were beginners of Greek language.

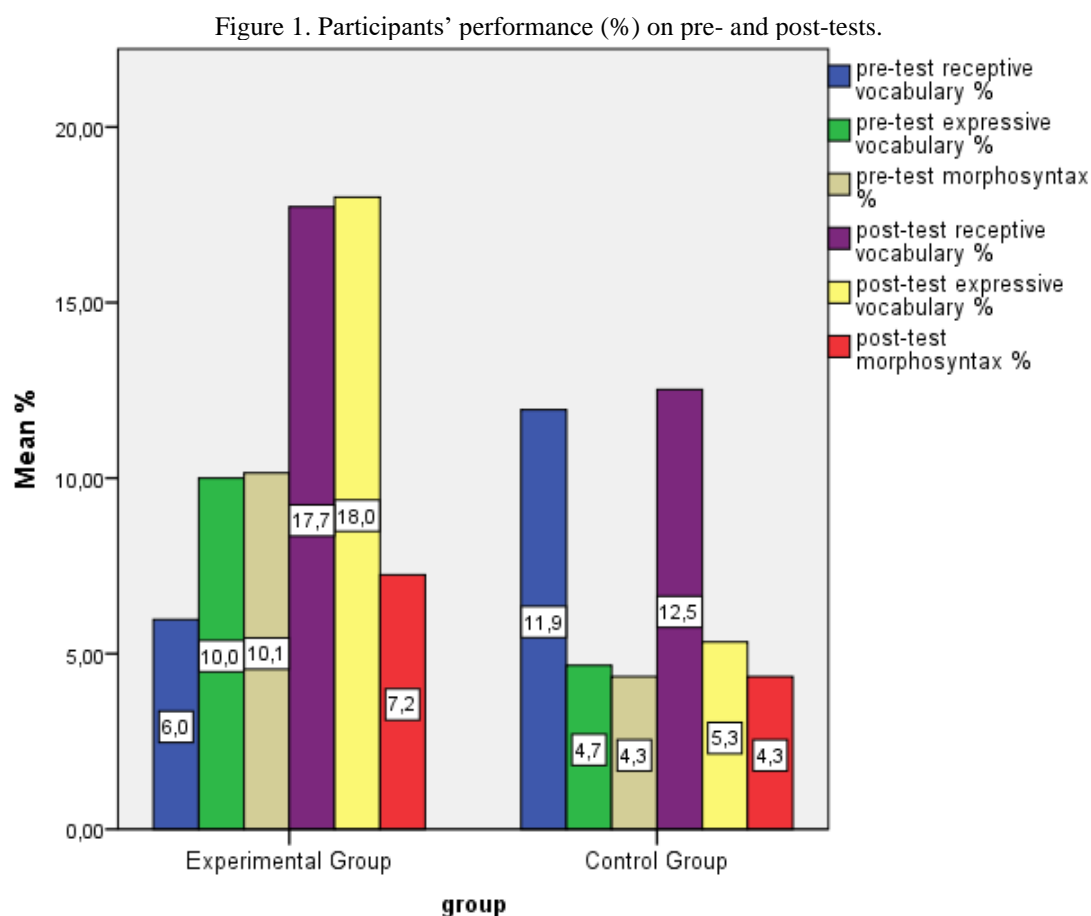
### **Material**

The material consists of: pre- and post-tests and the material for the intervention. In particular, tests (both pre- and post-tests) were developed in order to examine the lexical and morphosyntactic skills in migrant/refugee children. Before the administration of the pre-tests a non-verbal intelligence task was given in order to ensure that all participants had normal intelligence (Raven, Raven & Court 1998). In terms of the pre-tests, they tested receptive vocabulary (vocabulary comprehension) and expressive vocabulary (vocabulary production) and participants' morphosyntactic skills (production tasks). The post-tests were the same tests, which were administered immediately after the intervention (immediate post-test), in order to determine whether there is an improvement in children's language performance. All tests were off-line tasks. A series of two-month teaching interventions were implemented, in which only the experimental group took part; hence the experimental group attended 16 hours of teaching intervention. During the interventions daily vocabulary was presented using different teaching methods and deploying morphosyntactic information and speakers were exposed to all 4 skills (listening, speaking, reading and writing); thus, they were also exposed to literacy in Greek.

## RESULTS

Non-parametric tests (*Mann Whitney U*) were performed, since the distribution was not normal. The results have shown that in the non-verbal intelligence task no differences were observed between the groups; thus, the two groups are comparable.

In both pre- and post-tests, the performance was very low, indicating that the speakers were beginners of Greek. From the Figure 1 it is possible to detect that there are differences between the groups; however there are not statistically significant, apart from the scores on receptive vocabulary. The control group outperformed the experimental group ( $U=6.500$ ;  $z=-2.074$ ;  $p=.035$ ). No other differences were observed.



Similar are the findings in the within group comparisons (Wilcoxon tests), which have shown that no differences were observed between scores of the pre- and the post-test. Notwithstanding only in the experimental group, knowledge of the receptive vocabulary increased ( $z=1.992$ ;  $p=.046$ ).

In order to detect whether vocabulary and morphosyntax are linked, we run bivariate correlations. The findings have shown that in the pre-tests morphosyntax correlates with expressive vocabulary ( $r=.971$ ,  $p<.001$ ); while in the post-tests morphosyntax correlates with both receptive and expressive vocabulary ( $r=.888$ ,  $p=.008$ ;  $r=.866$ ,  $p=.012$ ; respectively).

## DISCUSSION

The present study aimed to explore the role of literacy in the acquisition of receptive and expressive vocabulary and morphosyntax in refugee and migrant Arabic-speaking adolescents.

Literacy was provided through teaching interventions. In order to observe the effect of literacy, half of the participants (experimental group) attended teaching interventions (2 hours per week) apart from their school attendance; while the other half, who formed the control group, just attended classes in the camp. In all participants pre- and post-tests were administered in order to detect their vocabulary and morphosyntactic skills in Greek before and after the intervention. The administration of the tests to the control group aimed to verify that any improvement is not because of the schooling or the regular input they received.

The results have shown that the only differences between the groups were observed before the intervention; thus the experimental group had limited vocabulary knowledge compared to the control group. Nonetheless the difference was eliminated after the intervention. The finding suggests that interventions have a positive effect on linguistic skills (Robinson & Sorace 2018; Beck & McKeown 2007). The absence of indicating any improvement in expressive vocabulary and in morphosyntax indicates that expressive vocabulary and morphosyntax need more time. Hence, the implementation of teaching interventions should be long-term (at least 6 months) in order to have significant results. Additionally, previous studies have shown that receptive skills preceded expressive skills at least for 6 months, explaining the absence of the improvement of the expressive vocabulary.

Interestingly, the results of the correlations confirm previous studies. More specifically, in the pre-tests, the performance on expressive vocabulary correlates with the performance on (expressive) morphosyntax. Similarly, in the post-tests, morphology correlates with both receptive and expressive vocabulary. The findings suggest that morphosyntax and vocabulary are closely linked (Hemphill & Tivnan 2008; Hoff 2009; Nassaji 2006; Swanson et al. 2008; Lee 2011) and that vocabulary positively correlates with the development of morphosyntax (Conboy & Thal 2006; Parra et al. 2011). The results also confirm similar previous studies on Greek language, which have found that lexical performance affects the morphosyntactic abilities and the level of literacy (Dosi 2016; Dosi & Papadopoulou 2019; Dosi, Papadopoulou & Tsimpli 2016; Papadopoulou & Agathopoulou 2017; Tzevelekou et al. 2013). Thus, the present findings suggest that teaching interventions should include literacy practices, even facilitating the native language of the speakers (Ekiaka Nzai & Reyna 2014; Nation 2001; Schmitt 2007).

One of the limitations of the present study was that delayed post-tests (2 months after the intervention) were not administered. Thus, the effect of the teaching interventions cannot be tested in the long term; the reason why was that these populations frequently move and it is not easy to find them. Additionally, the present intervention does not include systematically all the modern methods of teaching vocabulary and morphosyntax. Therefore, future research can leverage the gaps and perform a better intervention program, which will hopefully give more clear and robust results.

## **CONCLUSIONS**

The main goal of the present project was to investigate whether migrant and refugee children's language abilities can be positively affected by the systematic enhancement of their vocabulary and morphosyntactic development by means of teaching interventions. For the purposes of this study ten refugee and migrant adolescents took part. Half of them received literacy support in Greek through schooling and these formed the control group; while the other half received additional literacy support (by means of teaching interventions, two hours per week) and these formed the experimental group. In order to test the aim of the study, participants' lexical



abilities in (receptive and expressive) vocabulary and expressive morphosyntax were tested before (pre-test) the teaching interventions and immediately after them (immediate post-tests). The results have shown that the control group achieved higher scores on receptive vocabulary in the pre-tests; while this difference was disappeared after the teaching interventions. No other differences were found between the groups. The findings exhibit that it is not possible to observe significant differences in the expressive skills, if we consider that both groups received literacy; nonetheless receptive skills can be positively affected even in a short time span. Finally, correlations between morphosyntax and receptive and expressive vocabulary were detected, suggesting that vocabulary and morphosyntax interact, as previous studies have claimed. The present study can be the springboard to similar attempts and highlights the necessity of teaching interventions and literacy, in general, for a successful language learning.

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