Dora the Explorer: 
A TV character or a preschoolers’ foreign language teacher?

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Abstract
The present paper investigates the English vocabulary contained in the Greek version of Dora the Explorer. Comparison with the BNC wordlist and with the CYLET wordlist for beginners suggests that the show contains almost equal amounts of frequent and infrequent vocabulary and that only one-third of its vocabulary is appropriate for young learners. The research also indicates that both receptive and productive vocabulary can be acquired after viewing the programme, although receptive vocabulary gains are greater than productive. Moreover, it is claimed that productive vocabulary is better retained compared to receptive and that older viewers of the programme are better in vocabulary acquisition and retention than younger ones.

Keywords: frequent/infrequent words, receptive/productive vocabulary learning, vocabulary retention, preschoolers

1. Introduction
The latest trend in the research of TV viewing and its language learning effects is the animated educational programmes that address preschoolers. Dora the Explorer is a very popular programme which has won many prizes and has been researched a lot over the last decade in the United States. The show teaches preschoolers basic concepts and familiarizes them with the Spanish language and the use of maps. The Greek adaptation of the show aims at introducing English to toddlers. English words are presented in “clear, artificially slow speech” (Huntly 2006: 61) and are continuously repeated throughout each episode or even across episodes. The creators claim that the show was created based on Gardner’s Multiple Intelligence Theory (Gardner 1993) and that the writers of the show make sure that children will use all seven intelligences to help Dora (NickJr.co.uk 2007 cited in Carter 2008). The programme contains active participation and gives children opportunities to interact with the characters (long pauses when they are asked something in order for them to have time to respond).
The studies abroad that have examined Dora so far have mainly focused on its cultural elements (Huntly 2006; Guidotti-Hernández 2007; Carter 2008; Chappell 2010; Diaz-Wionczek, Lovelace & Cortés 2010), its use of maps and only a few on its language learning outcomes. In Greece the show has not attracted the same research interest; in fact it has been rather neglected. The purpose of this paper is to bridge this gap; to examine the English language contained in the Greek adaptation of the programme and determine whether preschoolers who view the show can successfully acquire and retain English vocabulary.

1.1 *Young learners’ vocabulary acquisition*

Young learner’s vocabulary acquisition is thought to be very important; in fact O’Dell (1997 cited in Konstantakis & Alexiou 2012) states that vocabulary teaching should be given high priority in the first years of language learning, even if that means that grammar may be neglected. A vocabulary teaching method that is claimed to be really effective with very young children (Cameron 2001) is incidental vocabulary learning which reminds of the way L1 is acquired (Schmitt 2000). Learning occurs as a “by-product” (Wesche & Paribakht 1999), meaning that vocabulary is acquired when the learners do not focus on word learning but on communicative purposes (Schmitt 2000; Laufer & Hulstijn 2001). Cameron (2001) indicates that toddlers can acquire a lot of words incidentally by interacting with adults and by listening to stories. Hart and Risley (1975) and Valdez-Menchaca and Whitehurst (1988) reached the same conclusion: that incidental teaching can successfully teach preschoolers new forms of language.

1.2 *Young learners’ vocabulary: Aiming at frequency or content?*

Research has shown that at the age of five, native speakers have mastered 4,000-5,000 word families (Nation & Waring 1997) whereas foreign language learners after five years of EFL learning know only 1,000-2,000 word families (Barnard 1961; Quinn 1968 both cited by Nation 1990; Milton & Alexiou 2009). Consequently, young foreign language learners are left behind and they need to catch up with the native speakers’ vocabulary size (Milton & Alexiou 2009) and learn large numbers of words.

Nevertheless, not all words are of equal importance in FL learning. Frequency is one important criterion to consider when choosing what vocabulary to teach to young learners. However, teachers and coursebook writers should not be mesmerized by
frequency. Young learners’ vocabulary should include thematically significant words, words that appeal to children’s interests and are applicable in their everyday world (Alexiou & Konstantakis 2009). Considering that frequency lists are not organized according to themes, vocabulary teaching should include low-frequency words as well (Milton & Vassiliu 2000). Milton (2009) claims that frequent and infrequent vocabulary should be equally represented in an effective beginner EFL coursebook.

1.3 Receptive & productive vocabulary knowledge
A distinction in the area of vocabulary depth that has caused great conflict is the one between receptive and productive knowledge (Nation, 2001) or passive and active vocabulary (Meara 1990; Laufer 1998). Passive/ receptive vocabulary knowledge refers to the comprehension of a word and the storage of its meaning in memory, while active/ productive vocabulary use involves the retrieval of the word from memory and its appropriate use (Nattinger 1988).

Measuring receptive and productive vocabulary sizes and investigating the relation between these two knowledge types have attracted research interest. The notion that receptive vocabulary sizes are larger than productive ones and that passive vocabulary knowledge precedes active, has prevailed over the last decade (Melka 1997; Laufer 1998; Fan 2000; Webb 2008).

It is thought that learning a word productively is more difficult than learning it receptively (Nation 1990; Mondria & Wiersma 2004). Learners do not forget receptive vocabulary easily and when this happens it mainly concerns low-frequency words (Cohen 1989; Olshtain 1989; Weltens & Grendel 1993 all cited in Schmitt 2000). Productive knowledge, however, is supposed to be more prone to forgetting. Nonetheless, this notion contradicts with the belief that productive learning is more difficult than receptive learning (Nation 1990; Mondria & Wiersma 2004) because knowledge which is hard to be acquired is supposed to be better retained.

1.4 Educational television & language learning
Webb (2010) believes that second language television programmes expose viewers to large amounts of authentic second aural input – a fact really important for foreign language contexts where learners have limited exposure to the foreign language. Studies of the last two decades on the correlation between television viewing and language outcomes suggest that educational television can positively affect young
learners’ language learning. Rice & Woodsmall (1988) found that young learners can learn new words from television viewing and that older children learn more words than younger ones. Rice et al. (1990) concluded that the TV programme *Sesame Street* contributed to young children’s vocabulary development and especially to children between three and five years of age where a rapid oral language development was observed.

Linebarger & Walker (2005) and Wright et al. (2001) found that programme content and genre are really significant; they found that child-audience informative programmes (i.e. educational programmes especially designed for children), which made use of strategies known to support language learning in live situations, led to an increase in vocabulary sizes and were associated with school readiness.

Finally, Linebarger & Kosanic (2001) tested 3-year-olds and 4-year-olds on their knowledge of Spanish before and after viewing *Dora the Explorer*. All children in total were found to have increased their knowledge of Spanish words. 4-year-olds, in particular, were proved to have improved significantly.

### 2. The Study

The purpose of the study is to examine whether the English vocabulary included in *Dora the Explorer* consists of both high- and low-frequency words and whether this vocabulary is appropriate for very young language learners. Moreover, the study will also research whether young learners can acquire receptive and productive vocabulary after viewing the show and whether there is an age difference in vocabulary gains.

More specifically, the research questions are:

- Does the English vocabulary included in the infant-directed television programme *Dora the Explorer* overlap with the first two thousand most frequent words in English and with the proposed vocabulary for the beginner’s level (Starters) in the CYLET?
- Does the specific TV programme facilitate both receptive and productive vocabulary learning?
- Can the vocabulary gained be retained?
- Is there an age difference in vocabulary learning?
2.1 Participants
Thirty Greek preschool children from the 6th Kindergarten of Agios Dimitrios in Athens participated in the study. They were divided in two groups; a group of 4-year-olds \( (M = 4.03) \) and a group of 5-year-olds \( (M = 5.04) \).

3. Methodology & procedure
3.1 Corpus of Dora the Explorer
The corpus created by the researcher includes only the English vocabulary contained in the show. The corpus contains spoken language although it is actually based on a script. It consists of 11,324 tokens in total and it is representative since the researcher transcribed the English vocabulary of all 98 episodes that had been broadcast in Greece until the beginning of the study.

3.2 Word lists
Two different word lists were used in the study. The first comes from Cambridge Young Learners English Tests (CYLET 2007). These tests are especially designed for young learners (7-12 years of age). The word list for the Starters level (CEFR A1 level) was used in the study because it was appropriate for the participants of the study which were 4- and 5-year-old beginners of English. This list contains 497 words approximately, a mixture of function and content words.

The second list came from the British National Corpus (BNC) and was compiled by Geoffrey Leech, Paul Rayson and Andrew Wilson. It contains the 2,000 most frequent words in English and is not lemmatized.

For the purposes of the present study, the corpus of the show was compared to the Starters vocabulary list to investigate if the English vocabulary contained in Dora the Explorer is appropriate for EFL beginner learners in Greece. Then the corpus was contrasted against the BNC list to examine whether Dora the Explorer consists of frequent English words only or whether it also includes infrequent words that are part of children’s world.

A point that had to be decided upon before comparing Dora’s corpus with the two lists was how vocabulary should be measured (in tokens or types of words). Types of words were selected since the show contains constant repetition. It should be noted here that the BNC list contains 2,000 tokens but only 1,781 types of words and Dora’s corpus consists of 497 tokens but of 456 types of words.
3.3 Vocabulary tests
Eight different and two delayed tests were created. In total, 43 vocabulary items were assessed receptively and 19 productively in the immediate tests. The two delayed recall tests aimed at checking whether the vocabulary learnt was retained or not. The first test assessed all the words from Tests 1-4 both productively and receptively (22 words in total). The second one tested the productive and receptive use of the words included in Tests 5-8 (23 words in total).

Both receptive and productive vocabularies were tested mainly through pictures, picture puzzles, finger puppets or realia. Distractors were used to assess the receptive vocabulary.

The vocabulary testing procedure lasted approximately seven weeks. After watching an episode each toddler was tested alone by the researcher (immediate recall). Eight different episodes were watched. In the third week the first delayed recall vocabulary test was administered, five days after the fourth immediate test was completed. In the seventh week the second delayed recall vocabulary test took place, ten days after the eighth immediate test was completed.

3.4 Data analysis
Quantitative research was used to collect the data of the study. The corpus of the show was juxtaposed against the CYLET vocabulary list and the BNC list with the use of a software called RANGE (Heatley, Nation & Coxhead 2002). Finally, Independent T-tests and Paired Samples T-tests were performed, using the statistical programme SPSS 17.0, to analyze the data of the vocabulary tests.

4. Results and discussion
4.1 Dora’s vocabulary: Aiming at frequency or content?
The juxtaposition of the corpus of Dora the Explorer against the BNC list indicated that there was an overlap of 47.47% between the types of words of the two texts (Table 1). In other words, half of the word types contained in the programme were high-frequency words something which is not surprising if we consider that the show includes many words which are frequently used in everyday life (e.g. greetings).
This high percentage of high-frequency vocabulary may be accounted by the fact that highly frequent words are easier to learn (Palmer 1917; Mackey 1965; McCarthy 1990 all cited in Milton 2009) and are acquired before infrequent ones (Meara 1992). Moreover, since high-frequency words are mainly function words which are essential to produce meaningful language (Milton 2009) but very difficult to teach to young children (Cameron 2001) the high proportion of them in *Dora the Explorer* facilitates their incidental acquisition by repeatedly exposing toddlers to them (ibid).

Nevertheless, the programme does not rely only on high-frequency words; the other half of the show’s vocabulary is infrequent. This fact should attract the researchers’ interest because it is assumed that the combination of frequent and infrequent vocabulary is what effective beginner EFL instruction should be comprised of (Milton 2009; Milton & Vassiliu 2000).

Before juxtaposing *Dora’s* corpus against the Starters list, a comparison between the Starters list and the BNC list was conducted (Chart 1) in order to investigate whether the Starters list contained frequent words or whether it included a large amount of low-frequency words which are part of children’s world. This comparison

### Table 1. *Dora’s* corpus vs BNC list

<table>
<thead>
<tr>
<th></th>
<th>BNC List</th>
<th><em>Dora’s</em> Corpus</th>
<th>Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unique Types</strong></td>
<td>1,452</td>
<td>364</td>
<td>47.47%</td>
</tr>
<tr>
<td><strong>Shared Types</strong></td>
<td>329</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Types</strong></td>
<td>1,781</td>
<td>693</td>
<td></td>
</tr>
</tbody>
</table>

*Chart 1. Starters list vs BNC list*
showed an overlap of 55.48% between the types of words of the two texts. In other words, more than half of the word types contained in the Starter’s list are high-frequency words. This finding indicates that there is a balance in the Starter’s list; high- and low-frequency words are equally represented.

<table>
<thead>
<tr>
<th></th>
<th>Starters List</th>
<th>Dora’s Corpus</th>
<th>Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Types</td>
<td>240</td>
<td>477</td>
<td>31.17%</td>
</tr>
<tr>
<td>Shared Types</td>
<td>216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Types</td>
<td>456</td>
<td>693</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Dora’s corpus vs starters list

Table 2 shows the unique and shared word types of the Starters list and of Dora’s corpus. The contrast of Dora’s corpus against the Starters list showed only one-third of Dora’s word types overlaps with the Starters list. After an in-depth analysis of the shared vocabulary an even more significant result occurs: 2.16% of Dora’s total vocabulary are both low-frequency and appropriate words for young learners; on the other hand, 29% of the total words are both high-frequency and appropriate words for young learners of English. This means that although there is a balance between high- and low-frequency vocabulary in the show (as shown in Table 1), the two-thirds of it is inappropriate for its viewers’ age. Also, contrary to what was expected, only a slight amount of the shared vocabulary consists of low-frequency, thematically significant words that are part of children’s world (Alexiou & Konstantakis 2009).

4.2 Vocabulary acquisition - Receptive vs productive vocabulary

It is obvious from Chart 2, which shows the mean scores of the acquired vocabulary, that the average of the participants learnt receptively more than half of the words tested (scores from 54% to 84%). As far as the productive vocabulary is concerned, the participants’ mean scores rated from 11% to 66%. The finding that receptive vocabulary gains were greater than productive ones was expected since productive learning may be fifty to a hundred percent more difficult than receptive learning (Nation 1990). Also, this result confirmed previous studies which had reached the same conclusion (Melka 1997; Laufer 1998; Fan 2000; Webb 2008). The fact that such young children managed to perform that well in productive tests is quite remarkable. Nevertheless, it should be noted that there was not a steady increase in
the vocabulary learnt; the vocabulary gains were different in each episode indicating that the way the vocabulary was presented and its recycling rate played a part in its acquisition.

The success of *Dora the Explorer* in developing Greek preschoolers’ English vocabulary supports previous research which showed that it is possible for very young children to learn new words from television viewing (Rice & Woodsmall 1988; Rice et al. 1990) and that *Dora the Explorer* is related to language development and to improvement in expressive language (Linebarger & Kosanic 2001; Linebarger & Walker 2005).

Then, Paired Samples Correlations were carried out between the receptive and the productive tests to determine whether there was a correlation between them, since each knowledge type included different vocabulary. The results showed that there was a strong positive correlation between the receptive and the productive vocabulary tests (Table 3). In addition, statistically significant differences (p=0.000) were observed between receptive and productive vocabulary tests for both immediate and delayed tests. This is an interesting finding which clearly depicts that reception outperforms production.

<table>
<thead>
<tr>
<th>Paired Samples Correlations</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pair 1</strong> Immediate Receptive Tests1-8 &amp; Immediate Productive Tests1-8</td>
<td>0.456</td>
<td>0.011</td>
</tr>
<tr>
<td><strong>Pair 2</strong> Delayed Receptive Tests1-8 &amp; Delayed Productive Tests1-8</td>
<td>0.551</td>
<td>0.002</td>
</tr>
</tbody>
</table>

*Table 3. Paired samples correlations between receptive and productive tests*
4.3 Vocabulary retention

<table>
<thead>
<tr>
<th></th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pair 1</strong></td>
<td>Immediate Receptive Tests 1-4 &amp; Delayed Receptive Tests 1-4</td>
<td>0.412</td>
</tr>
<tr>
<td><strong>Pair 2</strong></td>
<td>Immediate Productive Tests 1-4 &amp; Delayed Productive Tests 1-4</td>
<td>0.851</td>
</tr>
<tr>
<td><strong>Pair 3</strong></td>
<td>Immediate Receptive Tests 5-8 &amp; Delayed Receptive Tests 5-8</td>
<td>0.653</td>
</tr>
<tr>
<td><strong>Pair 4</strong></td>
<td>Immediate Productive Tests 5-8 &amp; Delayed Productive Tests 5-8</td>
<td>0.560</td>
</tr>
<tr>
<td><strong>Pair 5</strong></td>
<td>Immediate Receptive Tests 1-8 &amp; Delayed Receptive Tests 1-8</td>
<td>0.641</td>
</tr>
<tr>
<td><strong>Pair 6</strong></td>
<td>Immediate Productive Tests 1-8 &amp; Delayed Productive Tests 1-8</td>
<td>0.793</td>
</tr>
</tbody>
</table>

Table 4. Paired samples correlations between immediate and delayed tests

Table 4 presents the correlations between immediate and delayed tests both in receptive and in productive tests. A strong positive correlation between immediate and delayed tests was found. Consequently, the children’s scores in immediate tests affected their scores in delayed tests; in other words being tested in immediate tests facilitated the storage of vocabulary in memory and its subsequent recall some days later.

Chart 3. Mean scores of participants’ performance in immediate & delayed tests (N=30)
The analysis showed that there was a decrease in the participants’ scores in delayed tests which was natural considering that delayed tests took place several days after the immediate tests. In receptive vocabulary the mean scores in immediate and delayed tests showed a decline of approximately 30% (Chart 3) whereas in productive vocabulary the decline was about 18%. The decrease between the sum of immediate receptive tests (1-8) and the delayed receptive tests containing the same vocabulary was proved to be statistically significant \((p=0.000)\) (Table 4).

However, in the productive tests only the difference between the last four immediate productive tests (5-8) and the delayed productive tests of the same vocabulary (Pair 4 in Table 4) was statistically significant \((p=0.020)\). This finding indicates that receptive knowledge had both a greater and a more significant decrease than productive. This surprising finding does not comply with previous studies which support that productive knowledge has the tendency to be forgotten whereas receptive knowledge is more easily retained (Schmitt 2000; Mondria & Wiersma 2004). The finding that only one-third of the receptive vocabulary was highly frequent may have affected the retention of it because according to Schmitt (2000) low-frequency words are more likely to be forgotten when it comes to receptive knowledge. This slight decline of productive knowledge may be attributed to the extensive recycling of the vocabulary tested productively. The selected words to be productively tested were the ones repeated in regular intervals in each episode.

With regard to the “bi-directional associations formed” (Nation 2001: 33) between receptive and productive knowledge, the vocabulary which was receptively tested in immediate tests was also productively tested in delayed tests and vice versa.
It is apparent from Chart 4, which contains words initially tested productively, that the participants performed the best in delayed receptive trials with the differences between delayed receptive trial and the other two trials being statistically significant ($p=0.000$), a fact that indicates once again that receptive knowledge of these words was larger than productive. Also, there were strong correlations between immediate productive and delayed receptive testing of the words ($p=0.006$) and between delayed productive and delayed receptive trials ($p=0.003$) indicating that each testing of the vocabulary led to its better retention, a fact that may not only be attributed to the recycling rate of the vocabulary but also to the children’s familiarity with the vocabulary (Gathercole & Baddeley 1989; Masoura & Gathercole 1999; Gathercole & Masoura 2003).

On the other hand, Chart 5 shows the words which were initially tested receptively. As expected, the delayed productive performance of the words was not as good as the
immediate and delayed receptive performance. Nonetheless, the results show that the participants had both receptive and productive knowledge for 18 of the 32 words tested in total, a very important finding considering the participants’ age.

The superiority of receptive vocabulary sizes over productive is also apparent here (Melka 1997; Laufer 1998; Fan 2000; Webb 2008) and the strong correlation found between delayed receptive and delayed productive testing of the words (p=0.000) shows that productive knowledge follows and presupposes receptive knowledge (Melka 1997).

### 4.4 Age difference

In the process of finding out whether there was an age difference in the receptive and productive performance, it was found that the mean scores of 5-year-olds were generally better than the scores of 4-year-olds in receptive tests (see Chart 6).

*Chart 6. Mean scores of both age groups in receptive and productive tests*
When the difference between the two age groups was examined, it was found that there were statistically significant differences only in receptive tests (Table 5). This finding is in agreement with previous studies on language learning from TV programmes (Rice & Woodsmall 1988; Linebarger & Kosanic 2001; Rush 2011) which found that older children learnt more words than younger ones; this fact may be due to influences of linguistic knowledge or of prior viewing experience (ibid) or it can also occur due to the fact that older children are more cognitively developed and more capable of logical thinking which is essential for language development (Pinter 2006). However, the results yielded in the present study, which 4-year-olds scored better than 5-year-olds in three productive tests, contradict these beliefs (Chart 6). In the rest of the productive tests the mean scores were about the same between the two age groups.

<table>
<thead>
<tr>
<th></th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive Test 5</td>
<td>0,047</td>
</tr>
<tr>
<td>Receptive Test 6</td>
<td>0,002</td>
</tr>
<tr>
<td>Receptive Test 8</td>
<td>0,034</td>
</tr>
<tr>
<td>Delayed Receptive Tests 1-8</td>
<td>0,016</td>
</tr>
</tbody>
</table>

*Table 5. Paired samples differences between the 5-year-olds and the 4-year-olds in receptive and productive tests*

Moreover, there was no outstanding age difference involved in the analysis of immediate and delayed tests. As it is shown in Tables 6 and 7, 4-year-olds and 5-year-olds had similar mean scores in immediate and delayed receptive tests, with older children performing slightly better than younger ones in immediate and delayed testing.

<table>
<thead>
<tr>
<th></th>
<th>Receptive Tests 1-4</th>
<th>Receptive Tests 5-8</th>
<th>Receptive Tests 1-8</th>
<th>Productive Tests 1-4</th>
<th>Productive Tests 5-8</th>
<th>Productive Tests 1-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-y-olds_Immediate</td>
<td>15,4</td>
<td>11,53</td>
<td>26,93</td>
<td>1,87</td>
<td>2,33</td>
<td>4,2</td>
</tr>
<tr>
<td>4-y-olds_Delayed</td>
<td>10,13</td>
<td>7,87</td>
<td>18</td>
<td>1,93</td>
<td>1,20</td>
<td>3,13</td>
</tr>
<tr>
<td>5-y-olds_Immediate</td>
<td>15,8</td>
<td>14,73</td>
<td>30,6</td>
<td>2</td>
<td>2,13</td>
<td>4,33</td>
</tr>
<tr>
<td>5-y-olds_Delayed</td>
<td>11,53</td>
<td>10,38</td>
<td>22,23</td>
<td>2,20</td>
<td>1,46</td>
<td>3,92</td>
</tr>
</tbody>
</table>

*Table 6. Mean scores of both age groups in immediate and delayed tests*
Both groups had statistically significant differences (p=0.000) between immediate and delayed receptive testing. In contrast, there were some variations in the two age groups in immediate and delayed productive testing. Only the group of 4-year-olds had a statistically significant difference (p=0.000) between the last four immediate productive tests (5-8) and the delayed productive test of the same vocabulary.

<table>
<thead>
<tr>
<th></th>
<th>4-year-olds</th>
<th>5-year-olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Receptive Tests 1-4 &amp;</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Delayed Receptive Tests 1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Receptive Tests 5-8 &amp;</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Delayed Receptive Tests 5-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Receptive Tests 1-8 &amp;</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Delayed Receptive Tests 1-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Productive Tests 1-4 &amp;</td>
<td>0.836</td>
<td>0.271</td>
</tr>
<tr>
<td>Delayed Productive Tests 1-4</td>
<td></td>
<td></td>
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<tr>
<td>Immediate Productive Tests 5-8 &amp;</td>
<td>0.000</td>
<td>0.151</td>
</tr>
<tr>
<td>Delayed Productive Tests 5-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Productive Tests 1-8 &amp;</td>
<td>0.182</td>
<td>0.323</td>
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<tr>
<td>Delayed Productive Tests 1-8</td>
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<td></td>
</tr>
</tbody>
</table>

Table 7. Paired samples differences between immediate and delayed tests of both age groups

The finding that there were no important differences between the two groups in the receptive and in the first four productive tests may be attributed to the fact that the age difference of the two groups was a year only. Nevertheless, 4-year olds may have performed significantly different between the last immediate productive tests and the delayed productive test because of the influence of time that had intervened between immediate and delayed tests. In fact the double time had passed between the last immediate productive tests and the corresponding delayed productive test compared to the time passed between the first immediate tests and the corresponding delayed test. 4-year-olds memory may be more sensitive and prone to forgetting compared to 5-year-olds.
5. Conclusion
This study was an attempt to investigate the language learning outcomes of the TV programme *Dora the Explorer*. The findings of the study support that the English language of *Dora the Explorer* includes a balance of frequent and infrequent vocabulary although only one third of this vocabulary is appropriate for young children. It becomes apparent that the show can successfully teach foreign language vocabulary to preschoolers the majority of which can be retained. It is also concluded that participants’ receptive gains are larger than productive ones. Finally, the study suggests that older children viewing the programme are better in vocabulary acquisition and retention than younger ones.

It can be deduced that *Dora the Explorer* is a successful foreign language medium which can be used by parents, caretakers or even preschool teachers. Provided that there are changes on the show’s vocabulary to make it more appropriate for toddlers and that teachers reinforce the show’s viewings with explicit teaching of certain language structures, the children’s retention of foreign language vocabulary will become stronger. What would be interesting to examine in further research is whether the way words are presented (implicitly/ explicitly) affects their acquisition and whether children’s language learning aptitude influences the acquisition of the show’s vocabulary.

This research set out with the intention of having a lot of participants and showing a lot of different episodes of the programme to them; nevertheless, this was not feasible due to limited time since it was the end of the school year and due to the limited number of participants that the researcher had access to. Furthermore, a variable that could not have been controlled was that the programme had been viewed before the research was carried out, a fact that may have affected vocabulary acquisition.

With reference to vocabulary testing, a pre-test of the vocabulary that would be examined in the tests should have been given to the participants to control for initial knowledge of the words. That way a clear evaluation of the vocabulary development of the children would have been made. Concerning the vocabulary tests designed for this study, the fact that different words were examined in receptive and vocabulary tests and that the productive words tested were fewer than the receptive words made the comparison between the two types of vocabulary more difficult.
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