

INCIDENTAL FOREIGN-LANGUAGE ACQUISITION BY CHILDREN WATCHING SUBTITLED TELEVISION PROGRAMS

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ABSTRACT

Series of international studies have shown that subtitled television programs provide a rich context for foreign language acquisition. This study investigated whether incidental language acquisition occurs from watching a television program with / without subtitles. Children in the experimental conditions watch: (a) a 15 minute snapshot of a well known children's television program in Italian with Greek subtitles, (b) the same program without subtitles and (c) the TV program in Greek (control). The acquisition of vocabulary and the recognition of Italian words were higher in the condition with the subtitles, thus indicating that Greek students of fourth, fifth and sixth grade can incidentally acquire vocabulary in a foreign language through watching subtitled television programs.

KEYWORDS: Incidental language acquisition, Subtitled programs, TV, Italian.

1. INTRODUCTION

Individuals acquire mother tongue naturally, without systematic instruction in a relatively short period of time which spans basically the first five years of his life. In the case of learning a second or foreign language, research confirms that according to the Psychology of Learning a language is acquired from a person mainly through linguistic stimuli provided by the environment [Τριάρχη-Hermann (2000)]. As for the growth and development of children's vocabulary in both mother and foreign language, of great importance is the extensive contact with rich and natural language, as the wider meaning of a word cannot be fully understood unless the word occurs in varied semantic and syntactical contexts [Koolstra & Beentjes (1999)].

Media technologies such as video, audio and computer software, have found more and more their way to foreign language classes, and several studies [Danan (1992); (2004) among others] have certified their value as language learning material [Kuppens (2010)]. Television for example is for speakers (the word speaker is also used with the meaning "those who learn a foreign language,") a valuable source of auditory stimuli in a foreign language, (L2). Research has shown that watching television programs in a foreign language, (L2) can facilitate L2 vocabulary incidental learning. In small language communities, a significant number of television programs are subtitled which creates the opportunity for vocabulary acquisition both in mother tongue and in foreign languages. In many countries, television is a part of children's everyday life from the age of 2 to 7 years, which watch various programs on a daily basis. It is also a leading source of information and acquiring new knowledge for adults as well.

2. SUBTITLED TELEVISION PROGRAMS

Watching television has become a common way of receiving information from all over the world, and ranks high in the preference of children as a source of new knowledge. Drotner (2001) [as cited in Kuppens, (2010)] states that in many western countries English language television programs, movies and music are a considerable part of what the youth monitors in the Media. Moreover, with the availability of programs in many countries one can watch television programs in languages other than their mother tongue. In small European countries like the Netherlands, Belgium (and Greece), foreign television programs are mainly subtitled [Koolstra & Beentjes (1999)].

When a program is subtitled one can hear the original soundtrack while the subtitles in the target language are displayed at the bottom of the screen, whereas when dubbed the original soundtrack is replaced by voices in the target of actors in the target language of the audience. As Koolstra & Beentjes (1999) highlight the most important reason why subtitling is preferred to dubbing in smaller countries is that subtitling is much cheaper than other techniques. As estimated by Luyken et al. (1991) [as cited in Koolstra & Beentjes (1999)] the average cost for dubbing one-hour program is 15 times more than the average cost for subtitling an hour of the same program which means that subtitling is 15 times cheaper than dubbing.

From an aesthetic point of view, an advantage of subtitling is that it maintains the original voices of the actors. A disadvantage however is that it can distract the viewer from watching the actual pictures [Koolstra & Beentjes

(1999)]. In relation to language acquisition, subtitles are accused of encouraging viewers to rely on written text, distracting them from the spoken language, and even that encourage a form of laziness [Kuppens (2010)]. However, as suggested by the present paper, in the case of young students in non-educational settings, they can learn more through watching subtitled television programs rather than watching non-subtitled programs.

An important advantage of subtitling in comparison to dubbing is that learning is likely to occur. With subtitled programs there are at least three different input channels: visual image, the soundtrack (including foreign voices) and subtitles. This multisensory presentation of information motivates viewers to understand what is said and shown on television.

About fifteen years ago Koolstra & Beentjes, (1999) conducted a panel study on television's effects on children's reading skills. The study, which 828 primary school children were followed during three years, showed that the reading of subtitles on television may enhance the development of children's decoding skills, because, as the writers point out, reading subtitles provides extensive practice in decoding words.

The primary question about learning is what is it that makes us have the natural tendency to seek knowledge and to differentiate our behavior? Perhaps, most admissible point of view is that what motivates the person in order to learn is the need to adapt to the environment in order to survive (homeostasis). However, apart from homeostatic motives, there are others that do not relate directly with the need for survival, but also with human nature (e.g. curiosity).

A second possible learning effect of subtitled TV is the acquisition of a foreign language so there is expectation that subtitled television programs may contribute to learning words in a foreign language. We think it seems reasonable since vocabulary learning in such a condition occurs not because the learner is trying to learn words but because the learner is trying to understand what is being said, sung or written on the television screen. Furthermore, the meaning of words is not given but perceived by the context in which they are presented. Rapaport (2000) defines Contextual Vocabulary Acquisition, (CVA) "*as the active, deliberate, acquisition of a meaning for a word in a text by reasoning from context*". Rapaport continues explaining that it is the process that can be used by a reader to figure out a meaning for an unfamiliar word as it occurs in a passage being read. It is what you do when coming across such a word in your reading. As you realize you don't know the meaning of the word and you need to know it in order to understand the passage, you can try to figure out its meaning from the context, i.e., from clues in the co-text together with your prior knowledge (PK).

In his study, Rapaport (2000) focuses only on CVA during reading. However, he underlines that CVA can presumably be used in situations that do not necessarily include text and reading (non-reading, non-textual situations) like for example in ordinary conversations, or when watching TV programs. Besides the fact that firstly context always *determines* the meaning of a word, it does not always *reveal* it [Deighton (1959) cited in Rapaport (2000)] and secondly subtitles don't always provide accurate translations of the original script, as limitations of space and time generally reduce the rate of speech can be represented in subtitles [Rapaport (2000)], however, several experiments have shown that watching foreign language television programs, subtitled (or not), positively affect the ability for foreign language acquisition of children and adolescents [Van Lommel et al (2006) among others].

In a study which examines the vocabulary in 88 television programs, Webb & Rodgers (2009a) report that the understanding of television programs may be easier than understanding the written text or conversation, because the vocabulary "sounds" in television programs is supported by the visual input. On the other hand, in a study which examines the effects of visual stimulus in understanding television news stories in a foreign language, (L2) found that in some parts of a television program visual stimulus may not have any effect on the comprehension or even prevent it [Gruba (2004)]. Learning a foreign language is more effective when it happens in an authentic communicative environment where speakers are exposed to authentic language stimuli that are understandable and attractive. With authentic texts students get a complete picture of the use of words in their natural environment, because such texts show not only grammatically incorrect word usage but also their proper use, according to each communicative circumstance.

Monitoring subtitled Italian television programs may therefore lead to different types of language acquisition since when a student learns the language through realistic situations he/she has to face grammatical phenomena and new vocabulary. Advertisement texts for example are suitable for understanding and learning imperative and subjunctive occlusion. Moreover, apart from the word meanings, one may learn the meaning of expressions or standard sentences (e.g. "Ciao amico!") and in which circumstances these sentences can be used. In addition, as

Koolstra & Beentjes (1999) highlight, there may also be improvement in the ability of the viewer to discern separate words in the flow of spoken language, pronunciation of words, and improve the ability to correct proposals. Finally, viewers can learn to distinguish different accents and different forms of speech (e.g. formal, slang etc.). In the present study we focus on vocabulary acquisition.

3. RESEARCH ON FOREIGN LANGUAGE ACQUISITION THROUGH WATCHING SUBTITLED TELEVISION PROGRAMS

The notion that children's and adults' ability to learn a foreign language is stimulated through watching subtitled television programs is well established. Many studies on the incidental acquisition of a foreign language from the popular media have focused on television programs and have shown that monitoring enhances L2 vocabulary incidental acquisition. Decades ago, Elley (1989) says that children maintain knowledge of the new words they listen in the stories they are read to. In two experiments, primary teachers in New Zealand read stories aloud to children of their class, and through pre-test and post-test measured the extent of children's new vocabulary acquisition through listening to stories.. The results showed that the oral reading of a story is an important source of vocabulary acquisition either reading is accompanied by an explanation of the teacher of the meaning of the words or not.

Also, Koolstra & Beentjes (1999) report that students learned incidentally the meaning of words through academic reading without the explicit intention to learn words. On the other hand Vidal (2003) investigated vocabulary acquisition through academic listening and showed that vocabulary knowledge of students after listening to the lecture was greater than it was before the lecture. These studies have shown that people who learn a second language, (L2) can achieve a small but significant vocabulary acquisition through comprehension - focused listening [Horst (2010)].

In their study Brown et. al (2008) compared incidental vocabulary acquisition from stories read in three different experimental conditions: only read, read while listening to the text, and only heard . The performance in terms of the knowledge of words showed the third condition as the least effective, the acquisition proved to be very small and prone to be lost over time. A series of surveys that attempt to measure incidental acquisition of a foreign language that results from watching subtitled television programs in non-educational conditions [d'Ydewalle et. al (1989); (1995); (1997); Pavakanun et. al (1992); d'Ydewalle et. al (1999) among others] show that there is undoubtedly significant incidental language acquisition simply by watching a short subtitled TV program. In the corresponding Dutch experiment [Koolstra & Beentjes (1999)] children who watched the subtitled version fared significantly better than those who watched the non-subtitled version, whereas control group scored last. Also, older children fared better than the smaller.

4. THE PRESENT STUDY

Whether elementary school children may incidentally acquire elements of a foreign language through watching subtitled foreign television programs in a non-educational setting has been studied less than other age groups internationally. In Greece such studies are still very limited.

The present study is an extension of international experiments subtitled but differentiates from them in its most characteristics (language, age, television program, etc.), it explores the short-term effect of an Italian television program, subtitled and non-subtitled, on the incidental language acquisition of children aged between 9-12 years. The content of the chosen program presents understandable material (comprehensible input) [Krashen (1985)], which means it does not exceed the perceptual ability of the students. Moreover, in the selected program the pronounced language, is clear, understandable Italian. For the purposes of the study is followed the distinction between acquisition and learning. The first is unconscious, incidental, randomly done, without systematic guidance-teaching and in non-educational conditions (for example in the living room of the house watching TV). The second is conscious, intentional, resulted from systematic -instruction and occurs in educational settings (ie an organized learning environment). With Italian children are acquainted for the first time.

In Greece, students are acquainted with foreign language testing in Grade 3 as foreign language lessons in school (English) start in grade 3. Therefore the difference between the three age groups of the sample lies in the familiarity they have with a foreign language in general and the foreign language testing as well (Test: Vocabulary target word recognition, etc.).

4.1 Research Questions

Simultaneous viewing of the subtitles and listening to the soundtrack may be a factor in language acquisition. [D'Ydewalle & Van de Poel, (1999)]. Since both subtitles (in Greek) and sound track (in Italian) are processed

almost at the same time, there may be language acquisition in such context. Subtitles contribute to a richer context in which children may learn Italian words provided that they are able to distinguish the words spoken in the program. Subtitles are not only read mandatorily, but are also processed in detail and remembered quite well [Gielen (1988) as cited in [D'Ydewalle & Van de Poel, (1999)].

Research Question 1: Greek elementary school students, aged 9-12 years, can learn incidentally Italian words from a subtitled Italian-spoken television program.

We assumed that subtitled television programs provide a rich context from which children learn Italian words, so we attempted to answer a secondary hypothesis that the subtitles do *not* distract children during program monitoring thus undermining their understanding.

Also, there is the expectation that older children compared to younger, can learn more Italian words from the subtitled Italian program.

Research Question 2: Greek fifth and sixth graders can learn more Italian words from a subtitled Italian-spoken television program than do Greek fourth graders.

4.2 Design

The present organized intervention is a quasi experimental research modeled on "action research" and was conducted during school year 2010 to 2011. There were three different age groups included in the study, fourth, fifth and sixth graders. From age 8 on, children read subtitles in a similar way as adults [d'Ydewalle & Van Rensbergen (1989) as cited in D'Ydewalle & Van de Poel (1999)]. Participants were between 9-12 years old and were randomly assigned to experimental groups.

One could argue that experimental design with random assignments of students to treatment and control groups would make our findings more generalizable from the point of randomization of individual differences. However, fully randomized experimental designs often lack ecological validity due to the inauthentic environments in which studies are carried out (Snow cited in Borg & Gall, 1989). Because the intention of this study was to provide findings that are closer to authentic condition of watching TV at home, the author selected the design described here.

Table 1. Experimental Design

Grade	Experimental Group 1 Condition 1 (Subtitles)	Experimental Group 2 Condition 2 (No Subtitles)	Control Group Control Condition (Greek)	Total
Grade 6	11 (7g+4b)	12 (7g+5b)	11 (7g+4b)	35 (21g+13b)
Grade 5	8 (5g+3b)	7 (5g+2b)	8 (5g+3b)	23 (15g+8b)
Grade 4	12 (6g+6b)	12 (6g+6b)	12 (6g+6b)	35 (18g+18b)
Total	31 (18g+13b)	31 (18g+13b)	31 (18g+13b)	93 (55g+39b)

4.3 Material

The television program in the three conditions was a 15-minute cartoon in Italian which can entertain the children-students but can also motivate better than anything else.

Italian vocabulary matching test: The acquisition of Italian vocabulary was assessed by means of a multiple choice test asking for the Greek translation of 35 Italian target words that were used in the program. Each of the Italian target words was spoken at least four times in the program whereas its translation was displayed in the subtitles. According to Anderson & Lorch (1983) [cited in d'Ydewalle & Van de Poel (1999)] children generally pay more attention to the female voice therefore the test was presented to the children by playing an audio file on which the words were spoken by an Italian native speaker. Children were required to choose the correct Greek translation of the Italian word choosing from the three written alternatives. All alternatives given were words that appeared in the subtitles, as much as possible, with equal frequency.

Word recognition: Again test was presented to the children by playing an audio file on which the words were spoken by an Italian native speaker. Participants were asked to identify whether the Italian words heard from the audio file were spoken in the Italian television program as well, answering Yes or No accordingly. The word recognition test consisted of 30 Italian target words of which 20 were heard in the program and the other 10 were not heard at all. The words not used in the program were chosen as if they could have been used in the program. The word *nave* (ship) or *fiore* (flower) were not used in the soundtrack, but flowers and a ship were shown in the film footage.

4.4 Procedure

In the experiment, within each condition children participated in groups of seven to twelve students in vacant rooms of their school building. The students in experimental group 1 (Condition 1) watched the Italian television program with subtitles, in experimental group 2 (Condition 2) student watched the program without subtitles and control group (control condition) they watched the same program in Greek. The program last 15 minutes and was projected twice successively in all three conditions. Immediately after the end of the screening there followed the assessment of the acquisition of the Italian words resulting from monitoring the program. As for the instructions given to the children, we prepared a series of simple, instructions, which included a clear description of what they had to do. Children were explained that the activity concerns the way children watch TV, that the test does not concern their lesson and that there is no score. Children were encouraged to answer all questions and not to be intimidated to answer even those that they were not sure of the correct answer.

The Condition, Class and Gender are the independent variables whose values were encoded. The control of the statistical significance of differences in the averages among the three groups of the intervention was done by analysis of variance. The analysis is per-score, per scale (where score_1, score_2 are the dependent variables. Dependent variable (score_final) was measured by the total of score_1 in vocabulary acquisition and score_2 recognition of Italian target words). The three scales were analyzed and discussed with three factors: Conditions, Class and Gender as fixed independent variables. With the Full factorial model were controlled the main effects and interactions of all possible combinations of the independent variables.

5. RESULTS-DISCUSSION-CONCLUSION

The purpose of this intervention was to explore the short term effects on incidental language acquisition of children aged 9 to 12 years of age through watching an Italian television program, subtitled or not. Overall, it appears that we have evidence of language acquisition in both experimental conditions. The results (estimated in the context of quasi-experimental design) confirm the corresponding research hypotheses and highlight the positive correlation between monitoring the Italian television program, language acquisition, vocabulary acquisition and Grade.

In accordance with Research Question 1, children of Experimental 1 achieved higher vocabulary acquisition $M = 25.58$, than the children of Experimental 2 $M = 22.39$ who fared better than the children of Control Condition $M = 19.65$. The effect of the Condition was found statistically significant $p = 0,000$ in overall incidental language acquisition and vocabulary acquisition. The overall incidental language acquisition is higher in the condition with the subtitles, followed by the Condition 2 without subtitles and finally the Control Condition. Therefore, we can conclude that the information on the story that takes place in the Italian subtitled television program which consist of a) the Italian target words that are heard in the program, b) their Greek translation that can be read in the subtitles, and c) the importance of words supported by visual images on the television program, provide a framework from which Greek students can "catch" the importance of some of the Italian target words.

In addition, findings do not indicated that subtitles distract the attention of children. The Research Question 2 is also verified as the older children had greater overall language acquisition than what the younger ones. The effect of the Grade-age on vocabulary acquisition and overall language acquisition was statistically significant ($p = 0,004$, $p = 0,001$ respectively). It does not though appear to have any statistically significant effect on vocabulary recognition ($p = 0,144$). This means that language acquisition coincides here with vocabulary acquisition. The older children learned more words from the program than the younger ones and overall had greater language acquisition.

Neuman & Koskinen (1992) [cited in Koolstra & Beentjes (1999)] report that the ability of children to acquire vocabulary within a context is affected by the level of their linguistic competence. The averages of the scores in the control test were higher for students of 5th ($M = 41.87$) and 6th ($M = 42.62$) than it was for students of the 4th ($M = 39.44$), which does support the hypothesis that older children benefit more from the context of spoken language in the Italian television program compared to the younger and achieve greater language acquisition.

Overall there was not indicated any systematic correlation between Gender and Condition. The t-test of independent samples was not significant for any of the three scales indicating that neither girls excel boys, nor vice versa.

Language acquisition of a foreign language is stimulated by monitoring subtitled or not television programs. In real life, Greek students spend enough time watching television programs which means that they come in contact daily with a foreign language (mainly English). According to Webb & Rodgers (2009a) if speakers regularly watched TV, this could have a significant effect on the amount of vocabulary acquired. Therefore, the effect of watching subtitled television programs at home could well be stronger and cumulative. Research has also shown that increasing the number of times a word appears in a context (e.g. a television program) increases the possibility for vocabulary acquisition [Webb (2010)]. However, learning a foreign language cannot of course be limited in passive knowledge.

Speakers of a language may be particularly motivated to watch TV programs and movies for learning. Gieve and Clark (2005) found that television viewing was the second most common way used by European speakers as a strategic self-directed learning of a foreign language and the fourth most common way used by speakers of Chinese language [Webb (2010)]. However, can these findings support the (further) introduction of television and subtitled television programs in the foreign language classroom? The greatest benefit of using subtitled television programs for guided language learning is that they entertain children-students and motivate better than anything else so students put more effort to understand the teaching material. Nevertheless, in relation with the conclusions of this study, the fact that children acquire incidentally elements in Italian language from a subtitled Italian television program, should not automatically lead to the conclusion that generally subtitled television programs are therefore a more efficient means for guided language learning and one has to be careful in transferring conclusions of a study of incidental language acquisition in situations of guided language learning.

Nouns, are the simplest structural units in a language, therefore it is not surprising that the first indications of language acquisition found in vocabulary test. In the present study the exclusive evidence of language acquisition is the acquisition of Italian words, by children through watching the program. As shown in the results, Class and Gender have no significant effect on vocabulary recognition $p = 0,466$, $p = 0,144$ respectively. This means that it is not verified that children in Condition 2 pay more attention to the spoken words in the program than the children in Condition 1 and neither is verified the assumption that subtitles can be distracting to children. Therefore we can conclude that the simultaneous monitoring of the subtitles and the language of the program is a factor that favors language acquisition of a foreign language.

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