Using Podcasts to Change Learners' Attitudes and Beliefs in Learning / Teaching English as a Second Language: A Case Study in Secondary Education in Greece

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Abstract
The main objective of this study is to explore how podcasting can be implemented in teaching English as a Second Language as a supportive technological tool and thus contribute to the development of positive attitudes and beliefs of the learners. To this aim, the field experiment research was conducted. The study was carried out with a total of 28 pupils of the first grade of high school at an educational institution on Rhodes, Greece in February 2018. The students were assigned to the experimental group (15 students) and the control group (13 students). The results of the research have shown a positive change in students' attitudes and beliefs, though no statistically significant difference has arisen regarding the students' interest in the course, their self-confidence in English, the role of gender in learning English, and the difficulties students come across when studying English. Similarly, no significant change has occurred regarding the usefulness of English, the importance of the English accent, and the knowledge of another foreign language as a contributing factor to learning English more easily. Finally, a negative change was found regarding difficulties in oral communication in English.

Keywords: Attitudes and beliefs; English as a second language; Podcasting; Secondary education.

1. Introduction
Innovative studies applied to learning and teaching foreign languages often examine learners' attitudes and perceptions. Within this context, a study conducted by Monk et al. (2006), which was carried out at a University of Japan, found that students had negative attitudes and perceptions about podcasting as an educational tool. The researchers felt that the reduced interest in the use of podcasts was due to the abundance of non-targeted materials and the lack of proper design for their use. Another relevant study Stiffler et al. (2011) showed that students who did not have a positive attitude to podcasting found the written texts clearer and more comprehensible than podcasts. However, more recent studies (Bolliger et al., 2010; Hinkelman, 2018; Son, 2018) have identified students' positive attitudes towards podcasting and, more specifically, they acknowledge that the online environment make a very effective factor in student motivation.

Podcasting doesn't seem to have statistically significant results in the improvement of accent/pronunciation of students, whereas, at large, students significantly improve in reading comprehension, written and oral discourse when using podcasts (Abdous et al., 2009; Bin et al., 2017). According to other studies Chakowa (2018), Ducate and Lomicka (2009), podcasts can be used effectively for the improvement of pronunciation with exercises of phonetics. The ESL learners can get as much practice as they need by repeating the recordings. Chakowa (2018) and Ducate and Lomicka (2009), who have conducted studies in order to evaluate the perceptions of learners about pronunciation, found that learners' pronunciation did not improve significantly during classes due to lack of time, yet podcast projects with phonetics proved to be quite effective in improving learners' pronunciation.

Abdous et al. (2012), compared and contrasted several types of podcast applications to the complete integration of the tool into the curriculum as supplementary material for the lesson. The results of this study have shown that the podcast works efficiently as supplementary material with a marked difference in student performance.

In Greece, research into the contribution of podcasting to teaching is very limited. Panagopoulos (2010), in his study on the use of mobile learning, pinpoints the great value of podcasting in education and agrees that podcasting has radically changed the educational approaches. He concludes that podcasting adds a new dimension in teaching, creating a modern environment of interactive communication between teachers and learners. Another relatively recent study has revealed positive attitudes towards podcasting (Dendrinou and Karava, 2013).

The study conducted by Tsimogiannis and Komis (2010) on the use of new technologies in Greek education suggests that Greek teachers fail to use the new technologies effectively in their work. In addition, the study reveals that Greek teachers are not positive about using new technologies extensively in their classrooms and that they are not fully convinced of the possibilities they offer to improve their teaching.

It seems that the attitudes and perceptions of learners about podcasting as an educational tool are contradictory. As well as this, there is considerable lack of research into the contribution of the technology of podcasting to the development of positive attitudes and beliefs of pupils concerning the English language and its teaching in secondary

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education. The present study aims at adding to the literature by exploring the effectiveness of podcasting and the development of positive attitudes and beliefs of learners towards studying English.

The study is divided into six parts. The first part illustrates the theoretical framework of the study and focuses on the use and development of podcasting in teaching English as a foreign language. The second part presents the aim of the study, its main objectives and the research questions. The third part is about the research method followed and the fourth is about the results. The fifth part is the discussion of the results and the sixth presents the conclusions and suggestions for further research.

2. Theoretical Framework
2.1. Podcasting

A podcast consists of one or more compressed digital audio (or video) files delivered via RSS feed (Really Simple Syndication) or downloaded on a personal computer or other mobile device. The audio files are posted on the internet and individuals can subscribe to podcasts and automatically download new episodes as they become available. The concept of podcasting is very successful because the digital audio files can be easily produced and delivered in extremely low cost. The average user of a personal computer can become both a producer and a user of the digital files.

The increased interest and engagement with the content of the lesson can result from the use and creation of podcasts by the students themselves (Reed, 2010). Podcasting technology is based on the philosophy that students need to be actively involved in the learning process. The teacher-centered model has given way to the student-centered learning model and the fact that people have the inherent motivation to learn. Students learn better when using podcasting because (Peacock, 2001):
1. The process is enjoyable.
2. Its content is designed to fit into the existing knowledge.
3. Its content is based on a solution to a specific problem and it is authentic.
4. Monitoring what they learn (flow) and how they learn (learning styles) are both enhanced.

2.2. Using Podcasts for the Improvement of Foreign Language Teaching

Rosell-Aguilar (2007); Rosell-Aguilar (2017) whose research and study was on the use of audio files and mobile application intended for the purposes of teaching a second language, found that listening to authentic files is a pleasant activity in which learners are actively involved. Similarly, Sze (2006) defines podcasts as very effective for language comprehension and Ng'ambi (2008) and Lum (2006) argue that podcasts create an interaction between the listeners and their content. Podcasting is considered a complex cognitive activity (Abt and Barry, 2007), since it requires the reception of information and the implementation of processing strategies. Therefore, both podcasts and their transcriptions are useful to improving linguistic competence as auditory skills are considered synonymous with linguistic understanding (Lawlor and Donnelly, 2010). Teachers can assist students in creating podcasts, thus featuring an online learning environment which fosters high motivation towards the course (Yim *et al.*, 2017); (Bolliger *et al.*, 2010).

Additionally, Abdous *et al.* (2012) found that language skills are greatly improved by the use of podcasts. Similarly, Campbell (2005) and Constantine (2007) report that there is great improvement in the general understanding of the language as well as the development of positive attitudes towards podcasts as a technological tool. Podcasting has high pedagogical value and provides unique enhancement to the learning process as the learner constructs knowledge through active exploration, observation, processing, and interpretation (Rosell-Aguilar, 2007) while interacting with others.

In addition, Al Qasim and Al Fadda (2013) support that the learners' oral competence can improve when using podcasts. Other researchers, like Kennedy and Trofimovich (2008) and Cebeci and Tekdal (2010), have also reported improvement in oral competence. Sabet and Mahsefat (2012), have found that when students listen to the recorded audio files and they can have access to their transcriptions at the same time, they retain vocabulary much better than those students who only listen to the text. This confirms the theory of learning by using media. Cebeci and Tekdal (2010) argue that students who use audio files rarely use dictionaries. Edirisingha (2007), also notes that pupils' communication strategies significantly increase owing to the usefulness and practicality of the podcasts.

Finally, by creating their own podcasts, students can demonstrate what they have learnt, review and reflect upon the content of the lesson. They can also connect with schools and students beyond their geographical boundaries (Abdous *et al.*, 2012; Istanto and Indrianti, 2011; Kennedy *et al.*, 2014; Yim *et al.*, 2017).

2.3. Purpose and Research Questions of the Study

The main purpose of the present study, which is part of a wider research, is to investigate the impact of using podcasts as a learning tool on learners' positive attitudes and beliefs about learning English as a second language (ESL). In particular, the study aims at exploring: a) the attitudes and perceptions of the students before the teaching intervention regarding the adequacy of the technological tool, its educational nature and the degree of difficulty of podcasts, as well as the communication strategies and the motivation of the students, b) the attitudes and beliefs of students after the teaching intervention and c) the contribution of podcasting as a technological tool to shaping positive attitudes and beliefs about the English language.

The research questions that the study will attempt to answer are the following: 1st: What are the attitudes and beliefs of the students of the experimental group before the teaching intervention regarding the adequacy of the technological tool, its educational nature and the degree of difficulty of podcasts as a learning tool?

2nd: What are the attitudes and beliefs of the pupils of the experimental group after the teaching intervention and the introduction of podcasting as a technological learning tool?

3rd: Do the learners of the experimental group form more positive beliefs and attitudes about the English language learning with the use of podcasting?

3. Method

The present study illustrates some of the results of a broader study, conducted in a private secondary school in the city of Rhodes in February 2018. The research used podcasting as a learning tool to teach English as a second language. Two groups of the 1st grade of Gymnasium (equivalent to Year 7) were assigned to the experimental group with fifteen (15) students and the control group with thirteen (13). Seven (7) students of the experimental group were girls and eight (8) of them were boys.

In order to answer the main research question regarding the students' attitudes and beliefs about the English language and its teaching, and how these could be enhanced with the use of podcasting, the questionnaire of attitudes and beliefs was used. It was distributed only to the students of the experimental group, who were the ones who used the innovative technological tool.

The questionnaire used is the adaptation of the Hungarian version of Howritz (1987), BALLI questionnaire on beliefs about language learning. The BALLI questionnaire is widely used to investigate students' perceptions and attitudes towards language learning. The questions have been adapted so as to refer to the English language for the purposes of this study. The questionnaire consisted of 14 questions. The first five (5) questions investigated students' attitudes and the other nine (9) questions attempted to explore their beliefs. The questionnaire was given twice only to the students of the experimental group, once before and once after the teaching intervention.

For the interpretation and analysis of the data and the determination of statistically significant differences in pupils' attitudes, repetitive measurements were made on the same sample within two periods. The population cannot be assumed to be normally distributed as it was fairly small; therefore, the Wilcoxon test was run for the analysis of the data. This test is performed in cases like this, where repeated measurements on a single sample assess whether their population mean ranks differ.

For the determination of statistically significant differences, the statistical analysis of the data was conducted with a view to acceptance or rejection of null hypothesis (H_0) versus the alternative (H_1) for each item of the questionnaire. The hypothesis is compiled as follows:

H_0: There is no statistically significant difference in the perceptions of the learners of the experimental group before and after the intervention.

H_1: There is a statistically significant difference in the perceptions of the learners of the experimental group before and after the intervention.

The test is carried out using as a statistical significance level a = 0,05. Therefore, if the p-value is higher than that, the zero hypothesis is not rejected. Otherwise, H_0 is rejected.

4. Results

This study aimed at exploring the change in the attitudes and beliefs of the learners of the experimental group as observed in the distribution of the frequencies of their answers before and after the pedagogical intervention with the implementation of podcasting. The results regarding this change are presented in Tables 1 and 2.

Table-1. Breakdown of percentages of learners' responses about their attitudes towards English language learning before and after using podcasting

Items		Strongly Disagree (SD)	Disagree (D)	Moderately Disagree (MD)	Undecided (U)	Moderately Agree (MA)	Agree (A)	Strongly Agree (SA)
		Frequency %	Frequency %	Frequency %	Frequency %	Frequency %	Frequency %	Frequency %
Teaching methodology	BEFORE	7	0	7	13	20	33	20
	AFTER	0	0	0	20	26,6	26,6	26,6
Usefulness of English	BEFORE	0	0	0	6,6	6,6	6,6	80
	AFTER	0	0	0	6,6	6,6	6,6	80
Interest in the English class	BEFORE	33	7	13	27	0	13	7
	AFTER	33	40	0	20	0	0	7
Self-confidence in language skills	BEFORE	22	7	7	0	21	29	14
	AFTER	40	0	0	7	27	13	13
Difficulty in oral communication in English	BEFORE	20	27	20	6	0	7	20
	AFTER	40	6	13	7	20	7	7

Table-2. Breakdown of percentages of learners' responses about their beliefs regarding English language learning before and after using podcasting

Items		Strongly Disagree (SD)	Disagree (D)	Moderately Disagree (MD)	Undecided (U)	Moderately Agree (MA)	Agree (A)	Strongly Agree (SA)
		Frequency %	Frequency %	Frequency %	Frequency %	Frequency %	Frequency %	Frequency %
Importance in the role of gender	BEFORE AFTER	67,5 53	6,5 0	6,5 0	13 27	6,5 13	0 0	0 7
Potential in acquiring full proficiency in the English language	BEFORE AFTER	7 0	0 0	14 0	0 0	7 13	43 40	29 47
The importance of accent/pronunciation	BEFORE AFTER	0 0	7 6	7 13	13 7	20 20	7 27	46 27
Better competence in reading rather that speaking	BEFORE AFTER	20 7	6 20	20 20	7 0	20 13	20 13	7 27
The importance of using auditory material in learning English	BEFORE AFTER	0 0	6,5 0	6,5 0	13 13	20 34	27 13	27 40
General difficulties in learning a foreign language	BEFORE AFTER	19,5 0	7 7	7 0	7 20	13 20	19,5 7	27 46
It's easier to learn English if you speak another foreign language	BEFORE AFTER	7 13,3	13 13,3	0 13,3	40 20	13 0	7 20	20 20
The importance of revision and practice when learning a foreign language	BEFORE AFTER	0 0	0 0	6,5 0	6,5 7	20 13	27 27	40 53
Learning English is easy	BEFORE AFTER	0 0	0 0	1 7	1 7	1 7	2 14	9 65

The results arisen by the tests do not reveal statistically significant differences in the answers of the learners of the experimental group before and after the intervention in any question, as p-value> a in all questions.

5. Discussion

The first research question explored the contribution of podcasting technology as a supplementary tool to the development of students' positive attitudes towards the English language. The findings are presented below.

In relation to the teaching and learning of the English language, the attitudes of the students of the experimental group were slightly more positive after the educational intervention. More specifically, the percentage of those who initially opposed is now zero, whereas the proportion of those with a neutral attitude has increased. Regarding the usefulness of English in their future aspirations, the attitudes of participants after the pedagogical intervention did not change at all, in comparison to the original ones. The participants' post-test attitudes about their interest in the English course changed positively, as the percentage of respondents who "Strongly Disagree" and "Moderately Disagree" rose (73%). Moreover, the percentage of students who found English classes boring was limited to a very low percentage (7%), while the percentage of those who were not interested in English distinctly decreased.

The participants' attitudes regarding their self-confidence in their English skills after the intervention were slightly more positive. In fact, the percentage of those who were apprehensive about their classmates' reactions when making a mistake during the lesson was limited (53%), whereas the increase in those who were not particularly worried was insignificant. Regarding students' attitudes about the difficulty they may have in oral communication in English, a comparison of pre-test and post-test rates reveals that there was a slightly negative change in student attitudes. This negative change is estimated to have occurred due to the difficulties the students may have faced while familiarising themselves with podcasting, as the process was completely new to them.

The findings of the present study regarding the contribution of podcasting to the students' positive attitudes towards English are in agreement with Beccue *et al.* (2001), Veronikas and Maushak (2005) and Rosell-Aguilar (2017), who have stated that recorded files can be an effective and beneficial educational tool. The findings also

agree with Bin *et al.* (2017) and Lum (2006), who found that listening to authentic recordings is a pleasant and effective activity through which the students can be actively involved in understanding the language. English-language learners have very few opportunities to use the language outside of the classroom and, therefore, it is very important for teachers to provide them with as many opportunities as possible to practice their oral skills (Yoshida, 2013). For the purposes of the present study, podcasts were especially created by the teacher so that they were used to help students improve self-study skills, as supported by the literature (Son, 2018; Stanley, 2006).

Additionally, these findings are consistent with those of Hinkelman (2018), Shahramiri and Gorjian (2013) and Constantine (2007), who have stated that the motivation and general attitude of students are probably the most important factors that determine the success or failure of any complex task. Studies and experimental researches on pupils' attitudes and beliefs are countless and, of course, demonstrate that students' motivation and attitudes are the key to language learning (Richards, 2006; Rosell-Aguilar, 2017). Reed (2010), suggests that the primary motivation behind learning foreign languages is the students' key to successful language learning. In the course of the study, the students of the experimental group expressed the view that the digital content of the pedagogical intervention, i.e. the podcasts, attracted their interest and satisfied their learning needs. This result is in line with the study of Ng'ambi (2008) and Popova and Edirisingha (2010), who suggest that podcasting can create an interaction between listeners and its content and that both podcasts and their transcriptions are a very useful way to improve linguistic competence and understanding of the language. In addition, the result of this study is partly in line with the result of another relevant study Ducate and Lomicka (2009), according to which pupils' positive attitudes towards English significantly increased after the use of podcasts.

The findings of the study about the contribution of podcasting as a learning tool to the formation of students' positive beliefs about the English language are presented below. As far as the gender is concerned, the beliefs of the participants after the pedagogical intervention seem to have slightly changed. In particular, the percentage of respondents who believed that gender plays minute or no role in learning English was limited, whereas the percentage of respondents who believed gender played a significant role rose to a much higher level (20%). The percentage of respondents who expressed no opinion on the role of gender in learning English nearly doubled (27%). This change in pupils' beliefs may have occurred due to their conversations about the podcasting experience and the conclusion that podcasting had different effects on different sexes.

The learners' beliefs about the possibility and prospects of facilitating language learning are much more positive after the pedagogical intervention. The majority of the respondents were positive (MA 13% - A 40% - SA 47%), amounting to zero the percentage of those who were initially opposed.

The respondents' beliefs about the significance of pronunciation in English after the intervention were about the same as those before the intervention, as 74% of the them were positive and 19% were negative, demonstrating a small increase in the percentage of those who thought that the pronunciation was of minor importance. This change comes from the students who did not have a clear view of the significance of the pronunciation before the intervention.

Regarding the comparison between reading and speaking skills and how much they have changed after the intervention, the percentage of respondents who thought that it was relatively easier to read in English than speak in English grew (53%), essentially absorbing those who had a neutral stance before the intervention.

As far as the importance of listening practice is concerned, the percentage of respondents who believed that auditory material was important increased to 87%, fully absorbing the percentage of those who, before the intervention, believed it was of minor importance. The percentage of those whose stance was neutral remained the same.

The beliefs of the participants changed regarding the difference between the way of teaching foreign languages and other subjects. Actually, the percentage of those who thought there was a difference reached 73%, while the opposite was limited to 7%. A significant increase (20%) was also seen in those students who thought that there was no clear difference between teaching English and other subjects.

The students' beliefs that the knowledge of another foreign language is a contributing factor to learning English more easily did not change after the pedagogical intervention and the percentage remained the same. In contrast, the podcasting process reinforced the view of those who had no clear idea before the intervention and they now believe that it is easier to learn English if they can already speak another language.

After the pedagogical intervention, the percentage of participants who believed that frequent revisions and practice in a foreign language were relatively important or very important factors reached 93%. In contrast, the opposite view went down to zero and the percentage of those who did not have a clear view of the matter remained at the same level.

The percentage of respondents who believed that it was relatively easy to learn English slightly increased (86%) after the educational intervention, virtually absorbing half of those whose stance was neutral before the intervention.

The results of the present study are in agreement with other relevant studies that have shown that students' learning experiences have improved when podcasts are used in teaching. The students gain a considerable benefit in acquiring listening skills, as well as profound knowledge of vocabulary (Kennedy and Trofimovich, 2008; Rezapour *et al.*, 2012; Sabet and Mahsefat, 2012; Son, 2018).

The statistical analysis showed that there was no statistically significant difference in learners' attitudes and beliefs regarding the English language and how it is learnt before and after the use of podcasting. This result is not surprising, though. Despite the enthusiasm, the motivation and the interest shown by students in podcasting, two weeks is not adequate time for students to change their attitudes and beliefs. Further engagement and familiarisation with the new technology is expected to affect their attitudes and beliefs more positively.

6. Conclusion

The findings and the results of the present study point to valid conclusions, which will be presented shortly.

Despite the fact that the results of the study haven't shown statistically significant difference in the development of more positive attitudes and beliefs of the students of the experimental group after the implementation of podcasting as a supplementary teaching tool, there is a positive change to the methodology English is taught, which in turn has increased the students' interest and their confidence in English. There has also been positive change to the role of the gender as well as the degree of difficulty in learning English. Similarly, there has been zero change in their perception of the usefulness of English, the importance of the pronunciation/accent and the knowledge of another foreign language as a contributing factor to learning English faster. Lastly, negative change has occurred regarding the students' difficulty in oral communication in English.

At this point, it would be wise to mention several limitations of the study, despite the positive results from implementing podcasting to motivate students. The sample of 28 students was relatively small. A larger sample would increase the credibility of the study. There were also time constraints on the implementation of the research program, which did not allow its longer duration. The fact that learners were not at all familiar with podcasting was another restriction, as it is not certain whether students used this technology correctly while practicing outside of the school. Finally, the study was conducted only in English classes for students of the first grade of a private secondary school in Greece.

The current study attempted to add to the literature by exploring the efficiency of podcasting as part of the learning process in the Greek educational system. Despite the limited research on the nature and use of educational podcasts and based on the findings of this study, suggestions for further research are proposed. Future studies could examine the effectiveness of podcasting in public schools, in a larger sample of students and in other subjects of lower or higher levels. Future studies can use a combination of quantitative and qualitative data and to conduct personal interviews with students as well as with educators, school counselors and parents/guardians. Concluding, it could be argued that podcasting is a promising technological tool. The next stage is to set up a more exhaustive program of pedagogical interventions, which will last longer and will include teaching in more school subjects. The implementation of such a program in a larger group of students and the comparative study of data is expected to gain a better insight into the effectiveness of podcasting.

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