

## **ESL LEARNERS' PERCEPTION AND ATTITUDES TOWARDS THE USE OF PODCAST IN DEVELOPING LISTENING SKILLS**

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### **ABSTRACT**

Listening is considered as the most frequently used language skill in almost any communication, yet it is often observed to be particularly difficult, and sometimes causes anxiety and frustration among foreign and second language learners. Successful communication can be hindered without accurate understanding of the spoken message. Several research studies have suggested the use of podcast materials to develop ESL learners' listening comprehension. This study examines ESL students' perceptions and attitudes towards the use of podcasts in terms of developing their listening competence. Perceptions and attitudes towards podcasts have been investigated through a survey questionnaire. The vast majority of the respondents stated that they enjoyed using podcast and that it had stimulated their interest in learning English. They also acknowledged that the use of podcasts could help improve their language skills particularly listening.

Keywords: podcast, ESL, listening comprehension, perception, attitude

### **Introduction**

Communication competence involves mainly four skills: reading, writing speaking, and listening. Among the skills, listening in learning a foreign and second language has not been given much attention in spite of being the most needed ability in everyday communication. Without precise understanding of the spoken message, successful communication cannot be achieved. Like other language skills such as reading, writing and speaking, listening can be learned systematically. In earlier times, a trait of part of learning and teaching listening was to use professionally produced newscasts, radio, and/or TV programs. With new computer technologies and Internet resources such as podcast, English language learners are now able to learn various skills of English Language. Podcasting is considered one of the novel forms of audio and video materials which offer language learners many opportunities to practice language skills, especially in listening comprehension. Some research studies have already

acknowledged its potentiality and have documented much evidence that podcasts can greatly accelerate learners' speaking and listening skills. This small scale pilot study was conducted to examine ESL students' perceptions of and attitudes towards the use of podcasts for developing listening skills. It further examined whether students had the pre-requisite skills to ensure the smooth and effective integration of podcasts in learning listening.

### **Defining Podcast**

The word "podcast" is taken from two words: iPod and broadcast (Rosell-Aguilar, 2007). Podcasts are both audio and video files on the Net which are usually uploaded at regular intervals. Chan, Chen and Döpel (2011) defined podcast as a media stream consisting of audio and/or video and PDF files. Listeners can download their favourite podcast and transfer it to devices such as MP3 player, iPod and mobile phone (Kaplan-Leiserson, 2005; cited in Rosell-Aguilar, 2007). iTunes is considered as one of the best podcatchers software. Listeners do not need to visit every website frequently for new podcast episodes; they can now find a huge collection of podcasts from the iTunes store (Rosell-Aguilar, 2007). There are many types of podcasts such as television podcasts, radio podcasts, classroom podcasts, and individual or group podcasts. Television and radio news are existing programs turned into podcasts such as those created by Voice of America (VOA) available at <http://learningenglish.voanews.com/>. Individual or group podcasts are podcasts designed for multiple purposes such as those developed by the website at <http://grammar.quickanddirtytips.com/>. Besides giving tips on English grammar, this website offers podcasts on various topics such as health, education, laws, food, and technology.

### **Purpose of the Study**

Podcast has been used as a tool in various educational modes, e.g. blended learning (Dudeney & Hockly, 2007), independent learning (Bull & Reid, 2004) and collaborative learning (Hine, Rentoul, & Specht, 2004). Many academic institutions, including Duke University, Harvard University, MIT, and Stanford University, have already offered course materials via audio/video podcasts (Sorrentino, 2008). Podcasts have been used as supplemental resource (Bongey, Cizadlo & Kalnbach, 2006) and to support textbook materials (Stanley, 2005). Language learning has been recognized as one of the fields about to get help from the rapid growth in podcasting (Rosell-Aguilar, 2007). A few researchers have documented that podcast promotes second language learning, develops various skills of English language such as pronunciation (Ducate & Lomicka (2009), vocabulary (Putman & Kingsley (2012) and grammar (Istanto, 2011). Other literature on podcast comes not from research journals, but from magazine articles, conference proceedings which are concerned with technical issues of

creating and subscribing podcasts. Despite its significance to the academic success of ESL learners, research studies on podcast and L2 listening comprehension in academic contexts at tertiary level is scant.

The educational benefits of podcast have been investigated by many researchers, yet the idea has still not been introduced in the local contexts in terms of developing learners' listening skills. Unfortunately, until now there is little research conducted to gauge students' perceptions and attitudes towards podcasts in developing listening competence at tertiary level in Malaysia, and this study aims to fill in the gap. The purpose of this exploratory study was to investigate students' perceptions of and attitudes towards the use of podcasts in developing their listening competence. It further investigated whether students had adequate knowledge of podcast in order to ensure the smooth and effective integration of podcasts.

## **Review of Related Studies**

Learning listening skills in second language is one of the most difficult tasks for any learners because there are no rules as in grammar (Graham, 2006). Listening skills can be acquired over time with lots of practice. Rost (2005) states that "[l]istening encompasses receptive, constructive, and interpretive aspects of cognition, which are utilized in both first language (L1) and second language (L2) listening" (p. 503). Listening comprehension, which Flowerdew and Miller (2005) called an "integrated approach", is a complex, multi-dimensional process. Listeners do not passively absorb a message, but actively reconstruct it in their minds (Flowerdew and Miller, 2005). Listening usually comprises both bottom-up processing – from words to ideas, and top-down processing – from ideas to words (Rost, 2002, as cited in Flowerdew & Miller, 2005). Early research studies on listening (Vandergrift, 1999; Rost, 2002) suggest macro-strategies for developing listening competence. Macro-strategies of listening skills involve many activities: responding, monitoring, clarifying, inferencing and evaluating (Lynch, 2004). Predicting, clarifying and valuating are considered as the most important listening skills (Lynch, 2004). A number of researchers have conducted product-based research to gauge the effects of variable (e.g., audio and video materials) on listening comprehension and reveal that repetition does, indeed, lead to an increase in listening comprehension scores (see Li, 2009; O'Bryan & Hegelheimer, 2009, for examples).

The use of multimedia in teaching and learning various subjects offers learners multimodal presentation and multi-coding of information (Chan, Chen, & Dopel, 2008; Mayer, 2000). Presently, the use of multimedia tools has appealed more to educators, teachers and students for its huge potentiality, capability and

usefulness. The use of multimedia is becoming a new mode of communication in teaching different courses. Educational technologists are of the opinion that use of multimedia application both inside and outside the classroom accelerates students' learning process and achievement (Chan, Chen, & Dopel; 2008). Multimedia files such as podcast include different modes of presentation such as narration, picture, sound, and animation which help learners process information quickly through different sensory channels (Mayer, 2000). Moreover, podcast materials provide language learners repeated exposure to the target language which is beneficial to learning. It offers language learners with samples of real language and authentic materials (Thorne & Payne, 2005).

Research has shown that podcast helps independent learning (Stoten, 2007), enhances academic success (Lee & Chen, 2007), reduces stress and promotes students' cooperation (Lee & Chen, 2007; Vess, 2006), provide learners with examples of real speech and other authentic materials (Chan & Lee, 2005; Thorne & Payne, 2005; Stanley, 2005). In language learning, several studies have stated that learners can use podcast for developing various skills of English language (Kim & King, 2011; Lord, 2008; O'Bryan & Hegelheimer, 2007; Rosell-Aguilar, 2007). Rosell-Aguilar (2007) explains that podcasting facilitates self-paced learning as well as provides slower learners a platform for remediation. Kaplan-Leiserson (2005) points out that podcasting can provide another channel for material review as well as assists learners' listening skills.

Language learning is influenced by many factors and the most significant and facilitating factor is positive attitude (Mian, 1998). Teachers often find it difficult to motivate students both inside and outside the classroom. The use of podcasts can assist this aspect. Several studies (Kavaliauskienė & Anusienė, 2009; Lord, 2008) have been conducted previously on English language students' podcast use and their attitudes and perceptions of the podcasts' design and usefulness. In most of the cases, students' perceptions of the podcasts were found to be positive. For example, Kavaliauskienė and Anusienė's (2009) research study examined learners' perceptions of online listening to podcasts. The participants of the study were from Mykolas Romeris University, Lithuania. Most of the participants (76%) showed positive attitudes to the techniques of developing listening skills using podcasts.

Similarly, Francom (2009) used a questionnaire to investigate students' perceptions of the weekly podcasts. The findings of the study suggested that both teachers and students found podcast as an effective teaching and learning tool that brought success to students. Pilcher (2010) explored nurses' willingness to use podcast technology for educational purposes. Li's (2009) research also aimed at finding out about the perception of Hong Kong ESL Secondary 6 students

towards podcasts. Most of the respondents of the study agreed that podcasts had enhanced their language skills. The students showed great interest in carrying on these listening habits. Kim and King (2011) noted that students and teachers' attitudes towards podcasts varied depending on their previous experiences with various types of computer technologies. Students with high computer skills may foster positive attitudes towards podcasts.

Ducate and Lomicka (2009) in their mixed method study investigated the effects of using podcasts to develop students' pronunciation. A total of 22 students in intermediate German and French courses developed five podcasts throughout the semester. Finding of the study suggested that respondents' pronunciation did not improve significantly in terms of comprehensibility due to course time limit. However, the students' attitudes towards English language learning increased significantly after using podcast materials. Similarly, Knight's (2010) study examines the use of podcasts for phonetic exercises. A group of 36 respondents participated and 11 podcasts of graded phonetics were developed and uploaded to the website for students. Students of this project found the podcast exercises effective for developing their listening ability. They liked the ability to repeat the recordings many times and felt that their confidence in transcription had improved and their test scores has also increased due to using podcasts.

Similarly, Chan et al. (2011) investigated two podcast projects conducted at a university in Singapore, which were designed to supplement classroom instruction for Chinese and Korean students who learned English as a foreign language. A semi-structured interview was conducted to ascertain their perceptions of the podcasts' quality and usefulness. Chan et al. inferred that respondents who use podcasts on the move or outside their abodes had significant positive attitudes towards podcasts, and they were found to be interested to podcast-based learning after the exposure to the podcast course.

The use of podcasts also reduces students' anxiety and creates a sense of belonging to a learning community (Lee & Chan, 2007). Lord (2008) evaluated a joint project on podcasts in an undergraduate Spanish phonetic class to assess students' pronunciation and attitudes. The findings concluded that the majority of the students had positive attitude towards podcasts. They enjoyed using podcasts, and were inclined to listen to the podcasts inside and outside the classroom.

Perceptions and attitudes towards podcasts have been investigated and in most cases, positive attitudes were documented. Majority of the respondents of the reviewed studies hold positive attitudes towards the method of using podcasts in

language learning. The vast majority of the respondents stated that the method was exciting that they enjoyed using it. Most of the students acknowledged that the use of podcasts could help improve their language learning skills. Against this backdrop, the present study was conducted to find out if Malaysian tertiary level students have similar perceptions and attitudes or not towards podcast use in learning English.

## **Methodology**

The participants of the study were from an intact class from Putra University of Malaysia. Fifty-three second year undergraduate students participated in the study. Out of the 53 students, 44 were female and 9 male. They were between the ages of 21 and 25 years.

Quantitative data were gathered using an adapted close-ended questionnaire to gauge students' opinion, attitudes, beliefs and willingness regarding the use of podcast in developing listening competence. Before the distribution of the questionnaire, an introductory session on podcast was conducted. Terms such as podcast, sources of podcasts, tools required to use podcasts, and podcast uses in learning various skills of English language were explained to the participants. Some podcast websites were introduced, for example, [www.eslpod.com](http://www.eslpod.com), [www.tedtalks.com](http://www.tedtalks.com), <http://a4esl.org/podcasts/> and VOA Special English. The questionnaire comprises 50 questions. Likert-type questions, yes/no questions and open-ended questions were used to assess students' perceptions and attitudes toward podcast. The questionnaire was adopted from Francom (2009) and Pilcher (2010), and modified according to the specified research objectives. The questionnaire has four parts. The first part of the questionnaire contains demographic questions. The second, third and fourth parts of the questionnaire were designed to gauge students' familiarity with podcasts and other technological tools, students' belief and opinion towards podcasts and participants' willingness to accommodate podcasting pedagogy respectively.

The respondents filled out the questionnaire in class. They were given half an hour to complete the questionnaire. All the 53 respondents participated in the survey and returned the completed questionnaire. Quantitative data were analysed using Excel to get descriptive statistics, while the qualitative data were analysed and categorised according to the themes that emerged from the open-ended questions.

## **Results and Discussion**

Podcasting provides access to authentic materials and develops learners' language skills, gives opportunities to notice vocabulary and grammatical

structures. It is also considered as a powerful learning method about many aspects such as culture, history, policies of the areas where the target language is spoken. Generally, the findings suggest that language learners are positive towards using podcast technology, and they were interested to integrate podcast technology into their language learning process. Some of the reasons for the positive perceptions included the opportunity for students to learn at their own time, and to listen to specific materials that they miss or do not understand multiple times. Attitudes and perceptions towards podcasts have been investigated and in most cases, results were found to be positive.

This expository study was conducted to investigate students' perceptions and attitudes towards the use of podcasts in developing their listening competence. Questionnaire was designed to generate a few aspects e.g., demographic information of the students, resources available to them to use podcast and their attitudes and willingness towards the use of podcast in developing their listening skills. Some interesting findings generated from the questionnaire are highlighted in the following paragraphs.

#### ***Familiarity with Podcasts and Other Technological Tools***

The data collected from the students revealed that all the students possessed necessary equipment for using podcasts such as computer and/or laptop, software, mobile phone, and iPod, both at home and in their university. The participants were asked whether they were familiar with the term podcasts and different types of tools required to download and listen to podcasts. Surprisingly, none of the respondent had ever heard of the term "podcast". However, all of them are familiar with audio and video files found on the Internet. Participants stated that they had the experience of downloading different types of audio and video files from the Internet using different types of tools. They had never downloaded or listened to any podcast for developing their listening skills. Most of the students (95%) were familiar with iTunes, one of the best podcatchers, but they were not familiar with its usage for subscribing podcasts.

Kim and King (2011) claimed that students' and teachers' attitudes towards podcasts varied depending on their previous experiences with various types of computer technologies. Lack of computer knowledge is one of the significant barriers to the acceptance and implementation of podcasts in developing various skills of English language (Kim & King, 2011). Students with higher computer competence may foster positive attitudes of accepting podcasts for developing various skills of English language.

A few questions were designed to ask students to self-evaluate their own knowledge on basic computer applications according to the four categories, i.e. no prior experience, beginner, intermediate and expert user. As expected, majority of the students (94%) reported that they have knowledge on basic computer application. 70% students considered themselves as expert users, 24% students ranked them as intermediate users and only 5% students were found as beginners. Most of the students (94%) said that they are familiar with many computer applications, such as Internet, Search Engines, Facebook, YouTube, etc.

### ***Students' Perceptions and Attitudes towards Podcasts***

Students' perceptions of and attitudes towards the use of podcasts in developing listening skills of English language were found to be positive. Students supported the idea of adopting podcasts as language learning materials for developing different skills of English language. 87% of the respondents agreed with the notion that use of podcasts allows language learners more flexibility in language learning, makes lesson interesting and enjoyable, develop thinking skills, and enhance learner achievement. 95% students stated that podcasts can greatly help develop students' listening competence, 85% students agreed that podcast can be suitable tool for developing speaking skills of the learners. According to them reading and writing cannot be improved using podcast materials.

Podcasts provide teachers with the possibilities of facilitating language learning and also challenge the traditional teaching and learning methods. Traditional classroom do not give more importance to listening activities. Podcasts are an excellent means to motivate students because students use devices that are part of the students' experiences. Respondents of this study also acknowledged that podcast is an excellent tool and can be to develop their listening skills.

According to Warschauer and Healey (1998), training is one of the key elements in computer-assisted language learning context. Training enables learners to use multimedia files and other online resources effectively. Abdous et al. (2009) also stated that students need in-class training about how to subscribe, download, and save podcast using podcatcher such as iTunes. Respondents were asked whether training is necessary for them to use podcasts for developing skills of English language. All the respondents unanimously said that training was necessary. None of students had ever attended any training programme or seminar on podcasts. Although students (94%) claimed that they had sufficient knowledge on computer applications for subscribing and downloading podcast files, yet they felt that they needed the training.



### ***Participants' Willingness to Accommodate New Pedagogy***

Respondents of this study would like to use podcast materials in future to develop various skills of English language. Respondents (83%) of this study felt that they would have improved more if they had used podcast technology for developing skills of English language. They expressed their opinion that they wanted to use podcast to improve various skills of English language such as speaking, listening, reading, writing, grammar, and vocabulary. Almost all the students (98%) preferred using podcasts to develop their listening and speaking skills. Their teachers usually did not use any audio and video materials to teach listening. Respondents of the study stated that they would have appreciated if teachers had used podcasts in teaching listening.

Perceptions and attitudes towards podcasts have been investigated in several studies, and in most cases, positive attitudes were documented. In this study, responses from the students clearly showed that students were excited about learning different skills of English language after podcasts were introduced in the classroom. Respondents held positive attitudes towards the method of using podcasts in language learning. Respondents stated that the method was exciting, that they enjoyed using it as it stimulated their interest in learning the language. Most of the students acknowledged that the use of podcasts could help improve their language learning skills.

Students were asked to state the reason for using podcast for developing their listening skills. Some of the students said that using podcast materials can develop their skills of English language easily and quickly. One student stated that "Listening to a recorded material is much better than to a lecture in terms because it can be played again and again". Another participant said that "If you give people the option of listening at home, in maybe a more comfortable environment and give them the option to hear it again, they might process better". Another student commented, "I don't have experience with class on podcasts however if there is a collaboration of traditional learning and using podcast in learning, it would be more effective for learning process." One student opined, "It is a new thing for me. Its features are really appealing and interesting to me. Learning process could be made much easier with podcasts. Well, I might end up as a loyal podcast user in future." Another student stated that "I think podcast is an interesting way for ESL learners to improve their listening and should be used more often. If teachers provide podcast materials to us to listen at home and, we might process better". The respondents' comments clearly show that they are interested with the idea of using podcasts to develop their listening skills of English language.

Students mentioned their willingness to use the podcast technology as a learning tool to develop listening skills of English language. They stated that teachers should use podcast materials to motivate students. The participants seemed to have totally accepted the rationale for adopting podcasts for developing their listening skills of English language. They believed that podcasts as a viable educational tool has the potential to bring about definite improvements to their listening skills of English language.

## **Conclusion**

In earlier times, a trait of part of learning and teaching listening was to use professionally produced newscasts, radio, and/or TV programs. With new computer technologies and Internet resources such as podcasts, audioblogs, Ipods, and two-way synchronous video recording, English language learners are now able to learn and take control of their language learning through the creation of their own video- and audio-casting projects. English language learners can look for podcasts and such materials provide students with plenty of meaningful language, real-world communication, and access to new information. Listening is sometimes considered as one of the invaluable components in the process of developing successful academic literacy skills. There are various ways to locate and download podcasts. The most popular way to subscribe to a podcast is to use iTunes in Apple software. User can download the free iTunes software onto computer.

Language learners can subscribe to, download, and listen to existing podcasts. In addition, teachers and students can create podcasts of their own. There are many podcast resources already available online; some are specific to language learning and some are designed for native speaking audiences. The important point is that podcasts designed by native speakers of English provide learners many chances to listen real and authentic materials. Podcasts designed for English language learning include grammar tips, vocabulary, themes based podcasts, pronunciation, and idioms. For example, Grammar Girl –Quick and Dirty Tips for Better Writing is an education podcast series that offers short one-topic English grammar lessons.

This small scale expository study investigated undergraduate students' perceptions and attitudes towards podcasts in terms of developing their listening skills. There have been to date a few attempts in the literature to investigate undergraduate students' perception of podcasts in terms of developing their listening skills. This study also investigated the technology available to them for podcast access. The findings of this expository research study have some

implication for English language learners and teachers, and materials developers, and those interested in the use of podcast in language education. The study expects that data on learners' attitudes and perception of developing listening skills through podcast can cater more insightful indicators of their usefulness for ESL students. The findings of the study can influence English language teachers to adopt this novel technology in teaching English as students have positive attitudes towards podcast. The study recommends that rather than integrating instructional technology activities in teaching listening, English language teachers needs to integrate podcast into ESL curriculum. Results of the study also encourage teachers to initiate training on podcasts for them as well as their students to better handle self-study listening materials delivered via MP3 players or mobile devices.

The study was limited to investigate ESL learners' perceptions of podcast for developing listening competence. Further studies involving the use of podcasts are recommended since podcasts help develop learners learn different skills of English language. Additional recommendation for further study is to focus on the effects of podcasts on ESL learners' listening and speaking skills can be investigated. Moreover, the relationship between learners' learning style and podcasts can be investigated.

## References

- Abdous, M., Camarena, M.M., & Facer, B.R. (2009). MALL technology: Use of academic podcasting in the foreign language classroom. *ReCALL*, 21(1), 76–95.
- Bongey, B., Cizadlo, G., & Kalnbach, L. (2006). Explorations in course-casting: podcasts in higher education. *Campus-Wide Information Systems*, 23(5): 350–367.
- Bull, S., & Reid, E. (2004). Individualised revision material for use on a handheld computer. In J. Attewell, & C. Savill-Smith (Eds.), *Learning with mobile devices: Research and development* (pp. 35–42). London, UK: Learning Skills and Development Agency.
- Chan, A., & Lee, M. J. W. (2005). An MP3 a day keeps the worries away: Exploring the use of podcasting to address preconceptions and alleviate pre-class anxiety amongst undergraduate information technology students. In D.H.R. Spennemann, & L.,Burr (Eds.), *Good practice in practice: Proceedings of the Student Experience Conference* (pp.58-70). New South Wales: Wagga Wagga.

- Chan, W.M., Chen, I.R., & Döpel, M. (2011). Podcasting in foreign language learning: Insights for podcast design from a developmental research project. In M. Levy, F. Blin, C. Bradin Siskin, & O. Takeuchi (Eds.), *WorldCALL: Global perspectives on computer-assisted language learning* (pp. 19–37). New York & London: Routledge.
- Ducate, L., & Lomicka, L. (2009). Podcasting: An effective tool for honing language students' pronunciation? *Language Learning & Technology*, 13(3), 66-86.
- Dudenev, G., & Hockley, N. (2007). *How to teach English with technology*. Pearson: Longman.
- Flowerdew, J., Miller, L. (2005). *Second language listening: Theory and practice*. Cambridge: Cambridge University Press.
- Francom, J. R. (2009). A study of the effects of podcasting on student success and student attitude at one Northern Ontario College. Unpublished Master of Education dissertation, Nipissing University, Canada.
- Graham, S. (2006). Listening comprehension: The learners' perspective. *System*, 34, 165-182.
- Hine, N., Rentoul, R., & Specht, M. (2004). Collaboration and roles in remote field trips. In J. Attewell, & C. Savill-Smith (Eds.), *Learning with mobile devices: Research and development* (pp. 69–72). London, UK: Learning Skills and Development Agency.
- Istanto, J. W. (2011). Pelangi Bahasa Indonesia podcast: what, why and how? *Electronic Journal of Foreign Language Teaching*, 8 (1), 371–384.
- Kaplan-Leiserson, E. (2005). *Trend: Podcasting in academic and corporate learning*. Retrieved March 15, 2012 from <http://www.learningcircuits.org>
- Kavaliauskienė, G., & Anusienė, L. (2009). English for specific purposes: Podcasts for listening skills. *Coactivity: Philology, Educology*, 17(2), 28-37.
- Kim, D., & King, K. (2011). Implementing podcasts with ESOL teacher candidates' preparation: Interpretations and implication. *International Forum of Teaching and Studies*, 7(2), 5-19.

- Knight, R.-anne. (2010). Sounds for study: Speech and language therapy students' use and perception of exercise podcasts for phonetics. *International Society for Exploring Teaching and Learning*, 22(3), 269-276.
- Lee, M. J. W., & Chan, A. (2007). Reducing the effects of isolation and promoting inclusivity for distance learners through podcasting. *Turkish Online Journal of Distance Education*, 8(1), 85-104.
- Li, H. C. (2010). Using podcasts for learning English: Perceptions of Hong Kong Secondary 6 ESL students. *Début: the Undergraduate Journal of Languages, Linguistics and Area Studies*, 1(2), 78-90.
- Lord, G. (2008). Podcasting communities and second language pronunciation. *Foreign Language Annals*, 41(2), 374-389.
- Lynch, T. (2004). *Study listening: A Course in listening to lectures and note-taking* (2nd Ed.). Cambridge: Cambridge University Press.
- McCarty, S. (2005). Spoken Internet to go: Popularization through podcasting. *JALTCALL Journal*, 1(2), 67-74.
- Mayer, R.E. (2000). *Multimedia learning*. Cambridge: Cambridge University Press.
- Mian, A. H. (1998). Motivation and attitudes of beginning and intermediate level Panjabi students learning English as a second language. Unpublished doctoral dissertation, Indiana University of Pennsylvania, Indiana. PA.
- O'Bryan, A., & Hegelheimer, V. (2007). Integrating CALL into the classroom: The role of podcasting in an ESL listening strategies course. *ReCALL*, 19(2), 162-280. doi:10.1017/S0958344007000523.
- O'Bryan, A. & Hegelheimer, V. (2009). Using a mixed methods approach to explore strategies, metacognitive awareness and the effects of task design on listening development. *Canadian Journal of Applied Linguistics*, 12(1), 9-38.
- Pilcher, J. (2010). Willingness of nurses to learn with the use of technology: An Exploratory mixed-methods investigation. North Central University, Unpublished Doctoral dissertation, Prescott Valley, Arizona.

- Putman, S. M., & Kingsley, T. (2012). The atoms family: Using podcasts to enhance the development of science vocabulary. *The Reading Teacher*, 63(2), 100-108.
- Rosell-Aguilar, F. (2007). Top of the pods – In search of a podcasting “podagogy” for language learning. *CALL*, 20(5), 471–492.
- Rost, M. (2002). *Teaching and researching listening*. London: Longman.
- Rost, M. (2005). L2 Listening. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 503-527). Mahwah, NJ: Lawrence Erlbaum Associates.
- Sorrentino, F. (2008). E-Knowledge. In M. Khosrow-Pour (Ed.), *Encyclopedia of information communication technology* (pp. 215-221). Hershey, NY: Information Science Reference, IGI Global.
- Stanley, G. (2005). Podcasting for ELT. Retrieved from <http://www.teachingenglish.org.uk/think/resources/podcast.shtml>
- Stoten, S. (2007). Teaching Tips: Using Podcasts for Nursing Education. *The Journal of Continuing Education in Nursing*, 38(2), 56–57.
- Thorne, S., & Payne, J. (2005). Evolutionary trajectories, Internet-mediated expression, and language education. *CALICO*, 22(3), 371–397.
- Vandergrift, L. (1999). Facilitating second language listening comprehension: Acquiring successful strategies. *ELT Journal*, 53, 168-176.
- Vess, D. L. (2006). “History to go: Why iTeach with iPods”, [online]. *The History Teacher*, 39(4), 479–492. Retrieved from <http://www.historycooperative.org/journals/ht/39.4/vess.html>.
- Warschauer, M., & Healey, D. (1998). Computers and language leaning: An overview. *Language Teaching*, 31, 57-71.