


Non-English-majored Freshmen's Investigating Perspectives and Attitudes towards English Intonation through Podcast Integration in a Vietnamese University

Nguyen Hai Linh^{1*}, Nguyen Thi Luong¹, Le Duc-Hanh²

¹ FPT Polytechnic College, FPT University, Vietnam

² Hanoi University of Industry, Vietnam

*  responding author's email: hailinhnguyen98.ulis@gmail.com

* <https://orcid.org/0009-0006-8760-0755>

 <https://doi.org/10.54855/acoj.2314211>

© Copyright (c) 2023 Nguyen Hai Linh, Nguyen Thi Luong, Le Duc-Hanh

Abstract

Intonation is a significant aspect of mastering effective communication but is often underemphasized in language education, particularly for non-English-majored students. This study aims to examine the background knowledge and perceptions of students regarding intonation before and after the utilization of podcasts. The study involves 120 first-year students at a Vietnamese university who are currently enrolled in a listening-speaking course. During five-week intervention, the students are exposed to activities that are based on podcasts. Data is collected through pre- and post-intervention questionnaires to evaluate the changes in their attitudes towards English intonation and podcast usage. The findings reveal that before the intervention, students possessed a limited understanding of intonation. However, after the intervention, participants expressed positive attitudes and improvements in English intonation, highlighting the potential of integrating podcasts as an additional resource during English lessons. Also, the research recommends that future research be conducted to explore the long-term impacts of podcasts on language development, especially speaking skills.

Keywords: intonation, podcasts, integration, Non-English-majored Freshmen, perspectives

Introduction

Effective communication in English is proven to embrace not only vocabulary and grammar but also a critical yet often overlooked intonation. Trager and Smith (1951) strongly believe that intonation plays a vital element in spoken language that can have profound impacts on the interpretation and emotional context of messages. To be more specific, the rising and falling patterns of intonation are the key points in expressing meaning, emotions, and intentions in communication (Bolinger, 1989). Although it is of considerable importance, intonation is frequently underestimated in language education, particularly for non-English-majored students. As a result, Levis and Pickering (2014) conclude that misunderstandings and blunders in intonation can hinder students' ability to communicate effectively in a globalized world.

In the context of Vietnamese universities, where English is increasingly recognized as an essential skill but the frequency of English speaking is limited (Sundkvist & Nguyen, 2020), understanding and mastering English intonation are of paramount importance. However, for non-English-majored freshmen, the task of comprehending and applying intonation can be

particularly challenging, given their limited exposure to the language and its nuances (Celce-Murcia, Brinton, & Goodwin, 2010). This challenge raises the question of how best to bridge this gap and enhance students' intonation skills.

On the particular topic of a Vietnamese university, the study looks into non-English-majored freshmen's viewpoints and attitudes towards English intonation. We aim to not only understand the students' background knowledge and the challenges they face related to intonation but also explore their perceptions before and after the integration of podcasts as an educational tool. Podcasts have witnessed an exponential rise in popularity as a form of digital media in language education due to their potential for enhancing listening and speaking skills (Yoestara & Putri, 2019). This study seeks to examine the effectiveness of podcast integration in improving intonation understanding and application among non-English-majored freshmen.

This research has the potential to provide insights into the effectiveness of utilizing podcasts as a supplementary tool in teaching intonation to non-English-majored students. We encourage educators to consider the integration of podcast materials as a means to address intonation-related gaps in language instruction and, in turn, enhance students' English communication skills.

Literature review

Intonation

According to Roach (2000), intonation can be defined as a variation in vocal pitch. Within the domain of human communication, it is a rare occurrence for people to partake in discourse characterized by a steady and unvarying vocal pitch. In customary situations, the pitch of our voice experiences ongoing variations. Furthermore, one important part of intonation analysis is actively using hearing to figure out the speaker's pitch and how it works. The role of intonation extends beyond grammatical notions and encompasses syntactic and pragmatic connotations as well. Based on what has been said, it is reasonable to say that people who are more dedicated to learning and using intonation as a way to improve their language skills have a higher level of English proficiency (Wennerstorm, 1998). It is very important for teachers and trainers of a second language (L2) to make sure that students are aware of and pay attention to other prosodic elements, such as intonation, in addition to learning how to correctly pronounce words and sentences.

English language intonation is commonly categorized into three hierarchical systems: tonality, tonicity, and tone (Halliday, 1970). The concept of tonality involves the segmentation of a phrase into distinct tone groups. Tonality, commonly referred to as a tone group, can be seen as a noteworthy linguistic unit or a discrete bit of information. Tonicity refers to the spatial positioning of the tonic action or a significant alteration in the direction of pitch. Tonicity is a fundamental element of intonation. The term "pitch onset" pertains to the specific positions inside a speech utterance or a section of an utterance where a shift in pitch initiates. The modification in vocal frequency occurs at a designated syllable, referred to as the tonic syllable. Tench's research from 1996 shows that the tonic syllable in an intonation unit is the most noticeable stressed syllable because of how its pitch, volume, and duration all work together. The tonic syllable, also referred to as the nucleus within a tone group, is the third and most important element. The tone is defined and determined when the speaker locates the pitch nucleus. The type of pitch movement applied is intimately related to the tone of sentences.

According to Ladd (2008), intonation is basically categorized based on pitch movements, such as falling, rising, and rising-falling contours.

Falling intonation patterns are commonly used to signal the end of a statement or a declarative sentence. They convey a sense of completion, certainty, or finality. In English, this pattern is often used in statements, commands, and affirmations.

"I'll see you at the party." (Statement)

"Please pass me the salt." (Command)

"The answer is 42." (Affirmation)

Rising intonation patterns are frequently used to indicate questions or uncertainty. Besides, In English, this pattern is also used in yes-no questions and open-ended inquiries.

Rising-fall intonation patterns include both rising and falling pitch movements. They are often employed to express surprise, disbelief, or skepticism. In this pattern, the rising portion indicates an expectation, while the falling part shows a reaction to unexpected or confirmatory information.

Podcasts as language learning tools

The digital age has resulted in a notable transformation in the dissemination and consumption of information, giving rise to innovative mediums, including podcasts. Drew (2017) and Nguyen (2021) claims that podcasts have emerged as a diverse and captivating medium for the distribution of audio content across numerous genres, including education, entertainment, news, and storytelling. Particularly, podcasts exhibit a diverse range of formats, spanning from narrative storytelling and interviews to panel discussions and educational lectures. They refer to digital audio recordings that individuals can easily get access to through online streaming or downloading, enabling them to conveniently consume content according to their time and location preferences. In comparison to traditional radio broadcasts, podcasts provide a personalized listening experience, which allows users to subscribe to specific series or individual episodes. Thus, Llinares and Berry (2018) argue that the process of individualizing broadcasting supports individuals in exercising their agency by creating, choosing, and interacting with content that aligns with their personal interests. Frequently, a serialized structure is employed, wherein episodes are released at regular intervals in order to maintain audience engagement and foster a feeling of anticipation. This format promotes an engaging listening experience and can be used as an effective method for prolonged language immersion.

In the field of education, podcasts offer a unique platform for the distribution of educational material and the cultivation of self-directed learning. Educational podcasts offer a diverse array of subjects and disciplines, effectively addressing the requirements of individuals across different age cohorts and educational backgrounds. In accordance with the findings of Godwin-Jones (2011), individuals' auditory attributes facilitate their capacity to actively engage in the process of listening, thereby boosting their comprehension skills and nurturing the development of critical thinking abilities.

Lazzari's research contributes to the current accumulation of knowledge on podcasts, which strengthens our comprehension of the subject matter. According to Lazzari (2009), podcasts have surpassed their traditional role as audio content and have emerged as a pedagogical tool with transformative potential in higher education. They have become novel and inventive methods for distributing educational materials. Lazzari explains that podcasts extend beyond being a unidirectional form of communication, as they offer educators the opportunity to involve students in immersive auditory encounters that foster active listening and critical thinking skills. Hence, educators have the ability to establish a student-focused atmosphere that goes beyond the confines of a conventional classroom setting and promotes students'

competitiveness by integrating podcasts into listening and speaking classes.

Types of podcasts

Podcasts can take many forms to suit different tastes and goals. Understanding podcast types is essential for contextualizing their language education potential.

Educational podcasts focus on academics, personal growth, and skill improvement. According to Lazzari (2009), these podcasts have structured content like lectures or instructional materials. Educational podcasts offer structured language input and subject-specific knowledge, being promising for language education.

Conversational podcasts with informal dialogues and interviews are also important. Colloquialisms, speech patterns, and authentic language use are shown in these podcasts. Conversational podcasts improve listening comprehension and introduce multicultural linguistics through immersion (Llinares et al., 2018).

Language Learning and Teaching Podcasts teach grammar, pronunciation, and language. Davydenko (2021) highlights that these podcasts provide targeted language input and pedagogical insights directly related to language education goals.

Personal development podcasts focus on self-improvement, motivation, and life skills, according to Sotlikova and Haerazi (2023). These podcasts promote positive mindsets, motivation, and language engagement without directly teaching languages.

In language education, "authentic podcasts" are popular (Stanley, 2005). These podcasts, which are not designed for language learners, cover a variety of topics and feature real-world interviews and discussions. Authentic podcasts expose learners to natural language use, accents, and idioms, improving language skills. Authentic podcasts provide a language-learning context, despite their challenges for novices.

The purpose of podcasts in education determines their classification. Harris and Park (2008) define teaching-driven, service-driven, marketing-driven, and technology-driven Teaching podcasts provide lecture summaries and academic content to improve classroom instruction. Service-driven podcasts inform students, families, and the community about institutional policies and events. Marketing podcasts show prospective students campus life and academics. Finally, technology-driven podcasts aim to use technology in education (Harris & Park, 2008).

Advantages of using podcasts in language education

Podcasts are highly advantageous for students who possess demanding schedules and exhibit particular learning preferences, as they afford the ability to conveniently access linguistic material at any given time and location. According to Ashton and Brookes (2011), the availability of this feature enables learners to practice their language skills while traveling, engaging in exercise routines, or engaging in other daily activities, optimizing idle time for the purpose of language acquisition.

Natural conversations, interviews, and real-world discussions in podcasts expose learners to diverse accents, vocabulary, and language registers (Chinnery, 2006; Van et al., 2021). According to Stanley (2006), the act of acquainting learners with authentic language usage enhances their ability to comprehend spoken language and improves their overall proficiency in the target language.

Podcasts provide a diverse array of subjects, genres, and presenters, thereby affording learners the opportunity to access a wide range of linguistic input. According to Rachmaniputri et al. (2021), students' exposure to different language forms not only facilitates the development of

their vocabulary but also acquaints them with a wide range of linguistic structures and discourse patterns, which plays a crucial role in the development of learners' language skills.

Podcasts hold potential to supplement traditional instruction in English language classes. Ducate and Lomicka (2009) agree that the integration of podcasts into language learning facilitates the expansion of students' language input beyond the limitations of the traditional classroom setting.

Although considerable research has been undertaken to examine different aspects of the English language through the utilization of podcasts, there is a significant dearth of investigating podcast in relationship with intonation. Therefore, in order to address this gap, the present study investigates the effect of podcasts on the intonation abilities of language learners. By doing so, it illuminates an essential yet neglected aspect of language acquisition.

Disadvantages of podcasts in language education

Although podcasts present several benefits as a language learning tool, it is necessary to acknowledge the potential drawbacks they might entail.

Podcasts usually exist as auditory materials, thereby potentially resulting in an absence of visual context. According to Kessler (2013), learners may encounter difficulties in comprehending the context, tone, and nonverbal cues, which are essential for achieving a thorough understanding. Therefore, this leads to students' difficulties, particularly for those with lower English language proficiency.

The auditory quality of podcasts exhibits considerable variability, thereby having an obvious effect on holistic auditory engagement. As a consequence, poor audio quality that is characterized by background noise, indistinct pronunciation, and technical malfunctions has potential to limit learners' ability to comprehend and remain motivated (Indahsari, 2020). This variability could impact students' interest in using podcasts for language learning. Podcasts often feature a variety of accents, dialects, and speaking styles. While this exposure to diverse language use can be beneficial, learners might find it challenging to understand fewer familiar accents or dialects, affecting their confidence and interest in using podcasts (Chinnery, 2006).

Numerous studies have extensively investigated the effective use of podcasts for enhancing listening skills and expanding vocabulary (Chinnery, 2006; Hasan, 2012; Gonulal, 2020). A survey conducted in a Vietnamese university by Tran and Vu (2018) reveals that podcasts are especially beneficial for English learners (third-year students) because they provide a means for students to access real-life listening resources on almost any topic, they might be interested in. Nguyen and Nguyen (2021) show that podcast applications help improve the ability to hear Vietnamese spoken by international students studying at the school. However, there is a notable research gap in investigating the utilization of podcasts to enhance intonation. Therefore, this study aims to fill in that gap by looking into how non-English major freshmen feel about English intonation, specifically through the use of podcasts. This will help us understand the role of podcasts in filling in gaps in language instruction related to intonation and improving English communication skills.

Research Questions

To fulfill the purpose of the study, the survey seeks to answer the following research question:

How does the integration of podcasts in English-speaking-listening classes impact non-English major freshmen's perspectives and experience towards intonation at a Vietnamese university?

Methods

Pedagogical Setting & Participants

This research was conducted during the first five weeks of an academic semester with the active participation of 120 non-English major freshmen at a university in Vietnam. Students were chosen from a variety of majors, such as Computer Engineering Technology, Electrical and Electronic Engineering Technology, Control and Automation Engineering Technology, Electronic and Telecommunications Engineering Technology, and Computer Networks and Data Communications, to gain a comprehensive understanding of the interests and backgrounds of non-English majors. During the first and second years at HaUI, these disciplines share the Basic English for Electrical and Electronic Engineering English Program. The English Program employs a blended learning approach, where 47% of the curriculum focuses on vocabulary, grammar, reading, and writing components and is delivered online via EOP (English Online Portal), the university's English learning website. The remaining 53% of the curriculum concentrates on speaking and listening skills and is conducted offline, in face-to-face classroom settings.

Table 1. Descriptive statistics

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	100	83.3	83.3	83.3
Female	20	16.7	100.0	100
Other	0	0	0	100
Total	120	100.0	100.0	

Design of the Study

This study utilized a quantitative research approach to investigate the impact of integrating podcasts into English-speaking listening classes on students' perceptions and experiences related to intonation in English. The study employed pre- and post-intervention questionnaires and statistical methods to collect and analyze the data.

Podcast intervention

During the five-week podcast intervention phase, podcasts were added to the students' existing listening and speaking course to help them learn English more effectively and better understand how to use intonation. The selected podcasts covered a range of practical topics, aligning with the A1-A2 language proficiency levels, to ensure accessibility and relevance for non-English-majored freshmen.

Podcast Selection: The chosen podcasts included greetings, food, traveling, shopping, and weather. These topics were carefully selected to provide students with relevant content for improving their listening and speaking skills while focusing on intonation.

Integration with Curriculum: Podcasts were seamlessly integrated into the curriculum, enriching listening and speaking activities. Students listened to podcast conversations related to the chosen topics twice a week. After that, with the guidance of their teacher, students actively practiced speaking, creating similar dialogues, and applying the intonation patterns used by the speakers in the podcasts. Teachers also gave students basic rules and instructions on English intonation to help them understand and apply intonation patterns effectively. This integration

enables the practical application of intonation in everyday scenarios.

Content Assessment: Teachers engaged students in discussions and activities related to the podcast topics during English lessons to evaluate the effectiveness of the podcast intervention. Besides, teachers also assigned short quizzes and dialogue practice to measure their understanding and use of intonation patterns.

Data collection & analysis

In this study, quantitative data was collected through pre- and post-intervention questionnaires, employing a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). These questionnaires were administered to 120 first-year non-English major students at the beginning of the study. The pre-intervention questionnaire served to establish a baseline understanding of students' perspectives toward intonation and their prior experience with podcasts. Subsequently, a post-survey questionnaire was conducted following the integration of podcasts into English-speaking classes to assess any changes in their perceptions and experiences.

For data analysis, statistical methods were employed. Mean scores and standard deviations were computed to summarize the responses collected from the pre- and post-intervention questionnaires. Furthermore, paired sample t-tests were conducted to compare pre- and post-intervention responses. These statistical tests allowed for the evaluation of any significant changes in students' perspectives and experiences related to intonation after the podcast integration.

Findings and discussion

Perceptions before podcast intervention

Perceptions towards intonation before podcast intervention

When considering students' awareness of the significance of intonation in communication and their confidence in understanding intonation, a notable trend emerges. 74.2% are well aware of the importance of intonation in facilitating effective communication in the English language, with nearly 80% of students holding the perception that enhancing their intonation will have a positive impact on their proficiency in spoken English. However, only 19.2% express confidence in their understanding of intonation. The significant data indicates that there is a pronounced gap between students' recognition of intonation's importance and their confidence in understanding it. This incongruity emphasizes the need for tailored interventions and teaching strategies aimed at bridging this comprehension gap and enhancing students' understanding and utilizing it effectively in English communication. This outcome aligns with findings in Mai's (2015) study, highlighting a common understanding among learners about the importance of intonation in achieving effective spoken communication in English.

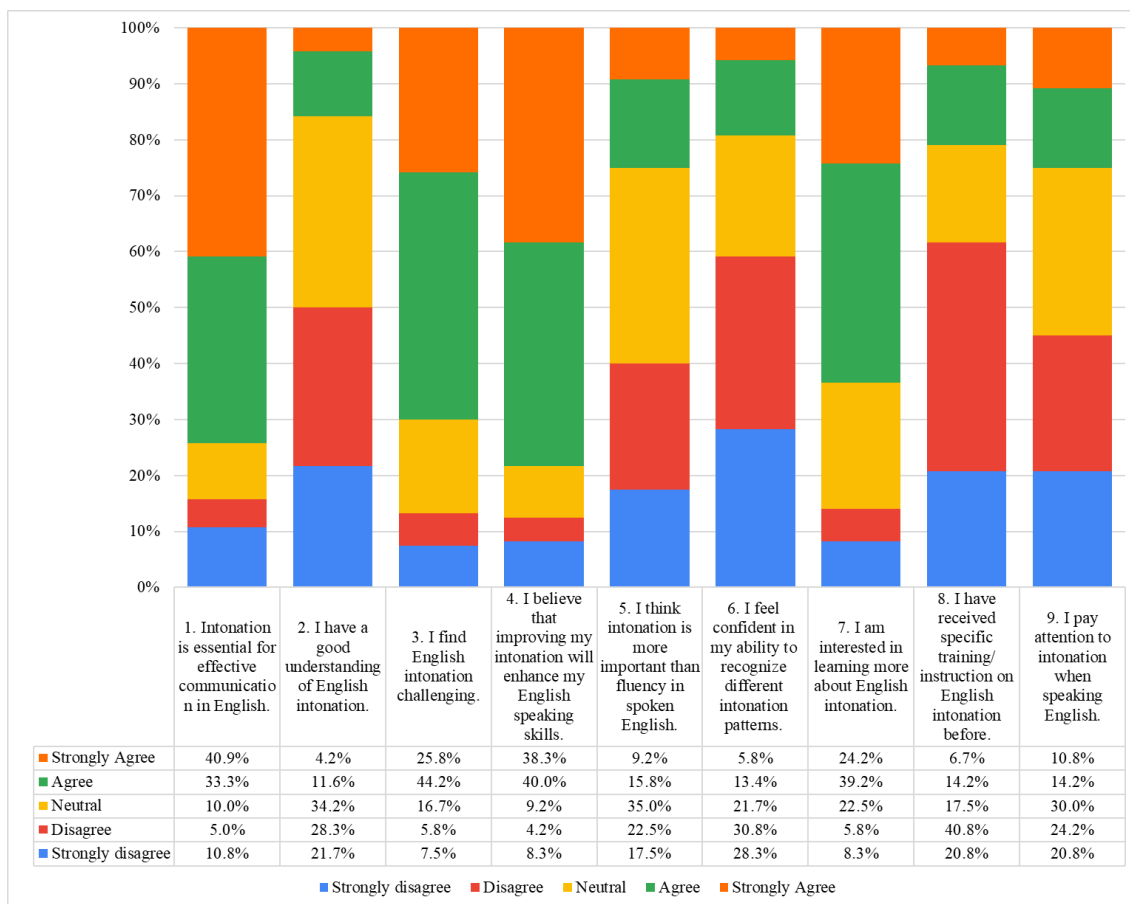


Figure 1. Students' perceptions towards intonation in English speaking skills (before podcast intervention)

Regarding challenges in mastering English intonation (Question item 3 and 6), a substantial 70% of the participants either agreed or strongly agreed that they find intonation challenging, highlighting the complexity of intonation in mastering English intonation. Besides, when examining students' confidence in recognizing different intonation patterns, another significant portion of students, totaling 59.1% (summing up "strongly disagree" and "disagree"), indicated a lack of confidence in acquiring a comprehensive understanding of the intricacies of English intonation. Additionally, only one fifth of students agreed that they have been provided with specific instruction or other support about intonation inside or outside the class, which is one of the hindrances to their intonation mastery. These results are consistent with Purba's (2020), which indicates that EFL learners encounter various difficulties in relation to intonation and feel uncertain about distinguishing different intonation patterns.

In short, while students express a positive attitude and interest in enhancing their intonation skills, a significant portion of participants find intonation challenging and express their lack of confidence in using proper intonation patterns. This holds an opportunity to integrate podcasts to enhance students' proficiency in intonation, aligning with their beliefs and enthusiasm for learning.

Perception towards using podcasts for learning English intonation before podcast intervention

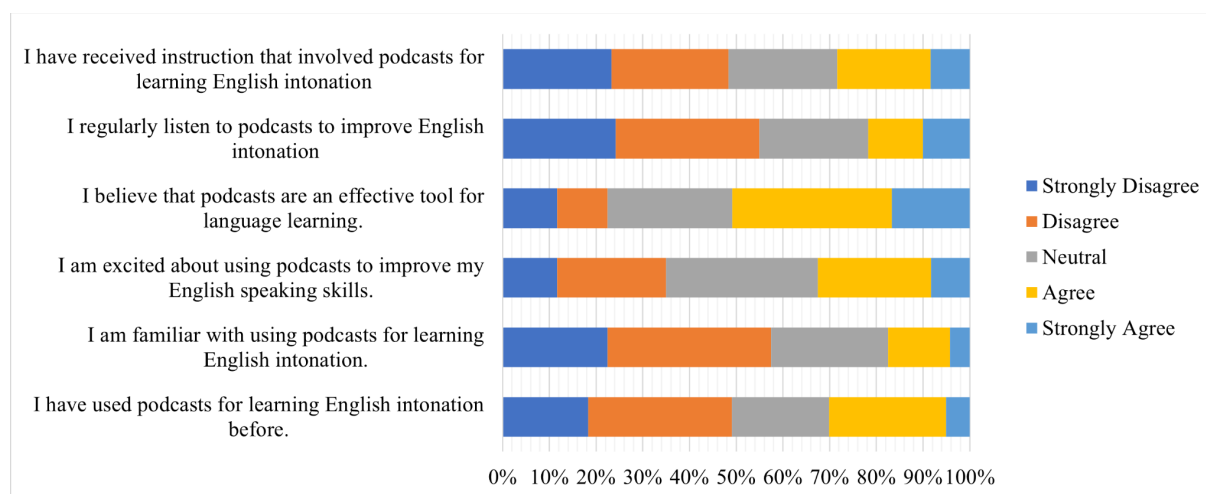


Figure 2. Students' perceptions towards using podcasts for learning English intonation (before podcast intervention)

In the analysis of students' perceptions before the podcast intervention, the data reveals varying trends. It is evident that the majority of students had limited prior experience with using podcasts for learning English intonation, with approximately 50% indicating they have never used them for this purpose. This aligns with the broader literature, which underscores the underutilization of technology-enhanced language learning tools, including podcasts, among learners (Brown & Warschauer, 2006).

Furthermore, the data revealing that a substantial percentage, roughly 57.5%, expressed their unfamiliarity with using podcasts for intonation improvement reflects the need for increased awareness and familiarization of these modern language-learning resources. A study by Hubbard (2008) also shows that students tend to lack familiarity with technology-based language learning tools.

Furthermore, when assessing the students' attitudes and beliefs, it becomes apparent that a significant proportion, 35%, do not express excitement about using podcasts to enhance their English-speaking skills. Their lack of enthusiasm underscores the importance of motivating and convincing students of the potential benefits of this approach. Although only 21.0% report that they regularly listen to podcasts for intonation improvement, more than half of participants believe that podcasts will help them improve their English intonation.

Regarding students' prior exposure to podcast-based instruction for learning English intonation, a substantial portion of our participants, accounting for 48.3%, strongly disagreed and disagreed with having received prior instruction. The data presents an opportunity for podcast intervention to introduce more students to this approach. This links with the overarching research theme that acknowledges the need for adapting language teaching to contemporary technological advancements (Chappelle, 2003, Zhang & Zou, 2023).

Perceptions after podcast intervention

Perceptions toward intonation after podcast intervention

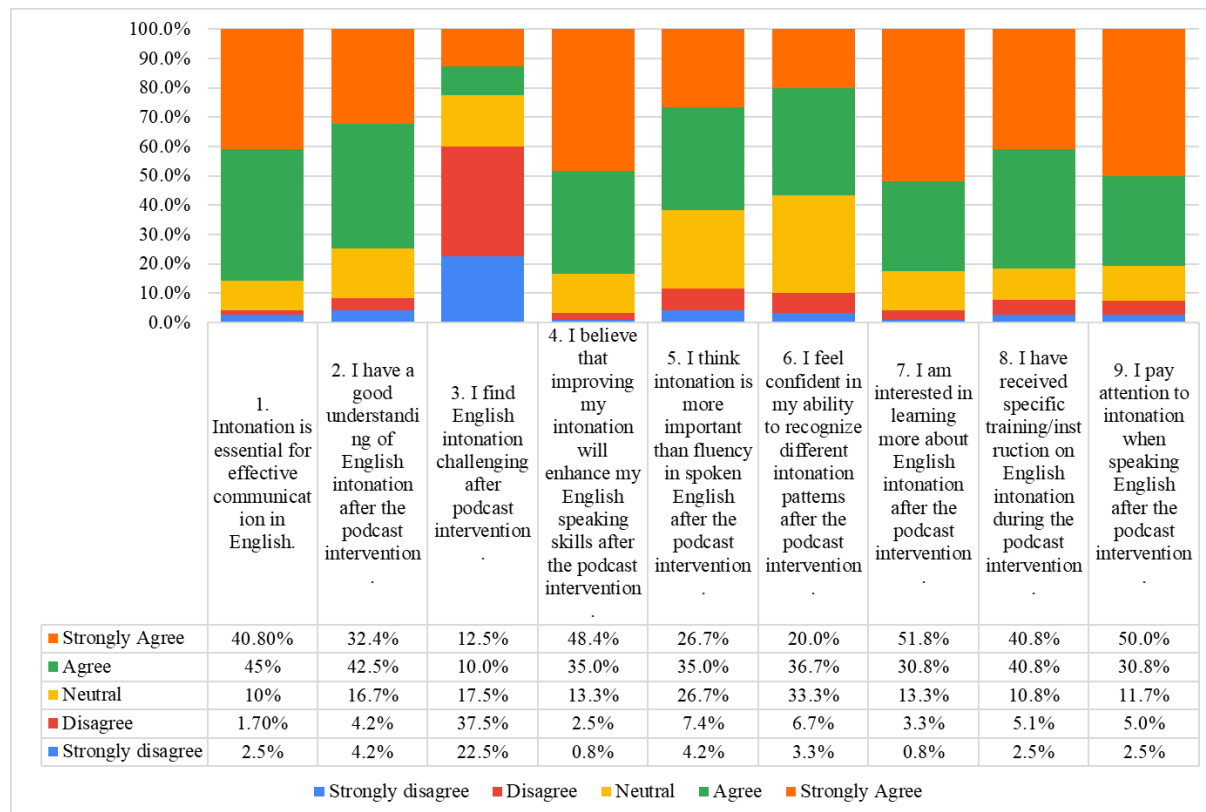


Figure 3. Students' perceptions towards intonation in English speaking skills (after podcast intervention)

In analyzing students' perceptions toward intonation after the podcast intervention, several notable trends and shifts in attitudes emerge. A considerable 85.8% of students agree that intonation is essential for effective communication in English, reflecting a substantial change in their perception. Most students (83.4%) also believe that improving intonation is beneficial for enhancing English-speaking skills. Besides, the data show a positive impact of the podcast intervention on their learning interests and engagement, with nearly 83% of participants agreeing that they are interested in intonation after the podcast intervention.

Almost 75% of the students now indicate that they have a good understanding of English intonation. This positive shift in perceptions suggests that the podcast intervention has effectively enhanced their comprehension of this linguistic aspect. Moreover, a significant 80.8% of students report paying attention to intonation when speaking English, indicating that many students have become more conscious of their intonation during English speech, showcasing the positive impact of the podcast intervention on their speaking habits and awareness of intonation.

In terms of finding English intonation challenging after the podcast intervention, approximately 60% of students now no longer find English intonation challenging, indicating a noteworthy improvement resulting from the intervention. Furthermore, 56.7% of students felt confident in their ability to recognize different intonation patterns, which demonstrates a substantial increase

in their confidence in recognizing intonation patterns, suggesting that the podcast intervention enhanced their perception and understanding.

Concerning training and instruction on English intonation, a remarkable 81.6% of students agree that they have received specific training and instruction on English intonation. This high percentage indicates that teachers and educators are effectively providing students with focused and specific training on English intonation, highlighting their commitment to enhancing students' language skills and intonation comprehension.

These findings support evidence from previous studies by Sotlikova and Haerazi (2023) that when podcast is incorporated into English learning, students' attitudes will be cultivated more positively, their behaviors will be fostered more desirably, and their self-efficacy will be enhanced highly. The finding of students' attitudes is in line with Davydenko (2021) and Gunawan et al. (2023) which revealed the development of students' interest in applying podcasts in their listening skill.

Perceptions towards using podcasts for learning English intonation after podcast intervention

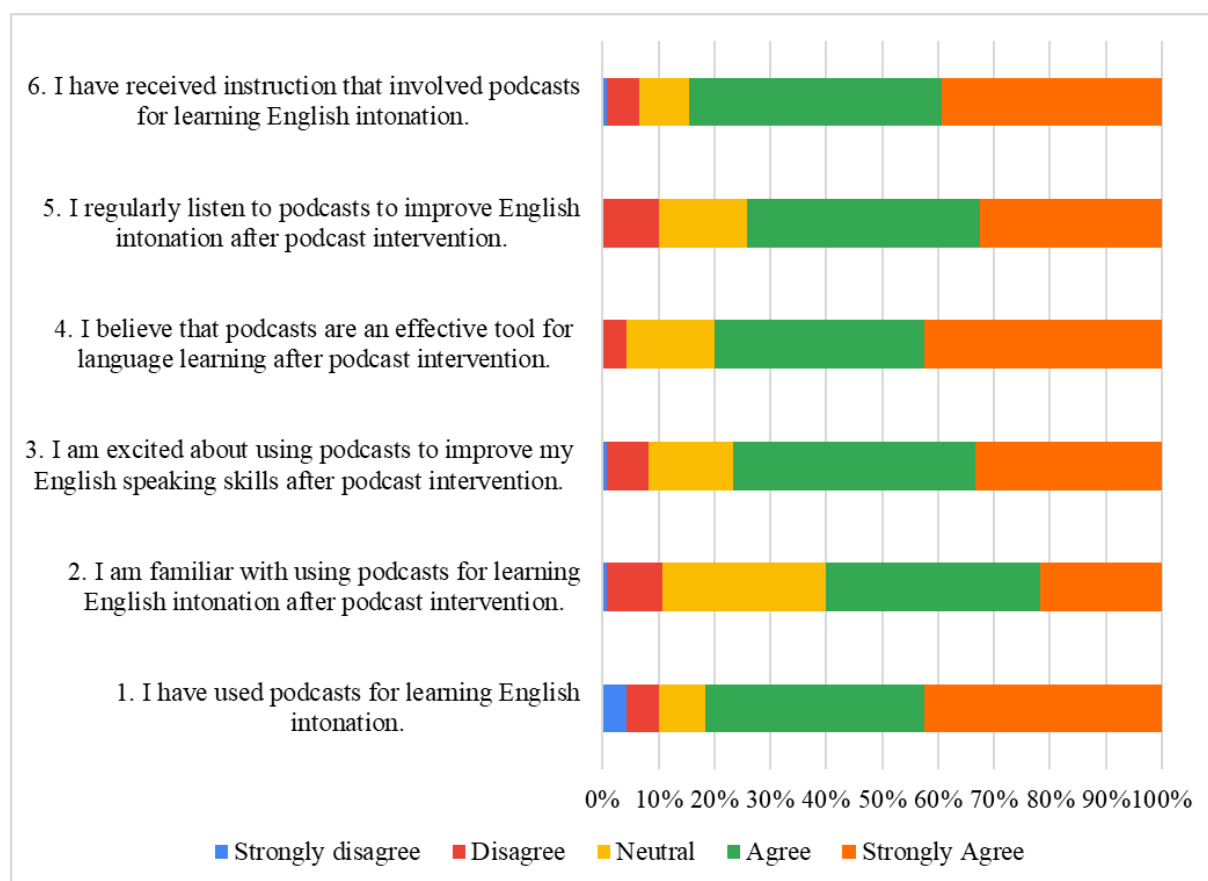


Figure 4: Students' experience and perceptions towards using podcasts in learning English (after podcast intervention)

After the intervention, the data reveals a significant increase in students' engagement with podcasts for learning English intonation. Approximately 82% of students state that they have used podcasts for learning English intonation. Besides, when considering their familiarity with using podcasts, 60% of participants express familiarity with this approach. This result reveals

the effectiveness of podcast intervention in promoting podcast utilization for English intonation learning.

The data also illustrates the effectiveness of the intervention in generating enthusiasm and belief in podcast usage. Nearly 77% express that they are excited about using podcasts to improve their English-speaking skills. Furthermore, a majority of students (80%) believe that podcasts are an effective tool to enhance English speaking competency, particularly intonation. This underscores the intervention's power to motivate and convince students of the advantages of podcast-based learning.

The data further demonstrates students' active engagement with podcasts, with 74% agreeing that they regularly listen to podcasts to improve their English intonation after the intervention. This reflects a high level of commitment and continued use of podcasts. Additionally, a substantial portion of students (84.5%) believe that they received instruction involving podcasts for learning English intonation. This signifies the successful integration of podcasts into the instructional process, reaching a significant number of students and promoting interactive learning.

Some of the issues emerging from this study relate specifically to students' experiences in using podcast during their learning English. The finding revealed evidence about the value-added usefulness of podcast in language learning experience in order to enhance knowledge and understanding. This is in accordance with studies by Mobasher and Costello (2021), Nguyen and Nguyen (2021), and Gunawan et al. (2023) in term of the benefits that podcasts bring to students' language learning.

Changes in perceptions towards English intonation and podcasts usage for learning intonation before and after podcast intervention

Table 2. Paired sample t-test results related to students' perceptions towards intonation in English speaking skills

Variables	Mean diff	t	df	cv
1. Intonation is essential for effective communication in English.	0.117	2.955	119	1.98
2. I have a good understanding of English intonation.	0.142	2.65	119	1.98
3. I find English intonation challenging.	-0.342	-5.125	119	1.98
4. I believe that improving my intonation will enhance my English-speaking skills.	-0.05	-0.929	119	1.98
5. I think intonation is more important than fluency in spoken English.	0.092	1.893	119	1.98
6. I feel confident in my ability to recognize different intonation patterns.	0.066	1.674	119	1.98
7. I am interested in learning more about English intonation.	0.126	2.917	119	1.98
8. I have received specific training/ instruction on English intonation before.	0.266	4.695	119	1.98
9. I pay attention to intonation when speaking English.	0.358	6.322	119	1.98

After the podcast intervention, students' perceptions and experiences regarding English intonation have undergone notable changes. The majority of students have developed a deeper understanding of the essential role that intonation plays in effective English communication, with a mean difference of 0.117 and a t-value of 2.955. This indicates an increased awareness of its significance. Similarly, students' comprehension of English intonation patterns has improved significantly, as shown by a mean difference of 0.142 and a t-value of 2.65, reducing the percentage of students with limited understanding. The perceived challenge of English intonation has significantly diminished, with a mean difference of -0.342 and a t-value of -5.125, suggesting that the podcast intervention has effectively alleviated some of the initial difficulties students faced.

Furthermore, students express a stronger belief and confidence in the positive impact of intonation on English-speaking skills, as indicated by a mean difference of -0.05 and a t-value of -0.929. Additionally, more students have agreed that intonation is more important than fluency in spoken English, supported by a mean difference of 0.092 and a t-value of 1.893, highlighting change in their perspectives towards the significance of intonation.

Moreover, it can be seen from the table that there is a notable improvement in students' confidence in recognizing various intonation patterns, as indicated by a mean difference of 0.066 and a t-value of 1.674. Lastly, more students express their interest in learning English intonation, with a mean difference of 0.126 and a t-value of 2.917, highlighting the beneficial influence of the podcast intervention. Overall, these post-intervention findings suggest a significant shift towards more positive and informed attitudes regarding English intonation, emphasizing the substantial impact of the intervention.

Table 3. Paired sample t-test results related to students' experience and perceptions towards using podcasts in learning English intonation

Variables	Mean diff	t	df	cv
1. I have used podcasts for learning English intonation.	1.457	7.34	119	1.98
2. I am familiar with using podcasts for learning English intonation.	1.008	9.01	119	1.98
3. I am excited about using podcasts to improve my English-speaking skills.	0.554	9.18	119	1.98
4. I believe that podcasts are an effective tool for language learning.	0.431	2.4	119	1.98
5. I regularly listen to podcasts to improve my English intonation.	0.925	5.66	119	1.98
6. I have received instruction that involved podcasts for learning English intonation.	1.43	8.11	119	1.98

The paired sample t-test results reveal significant improvements in students' attitudes and familiarity with using podcasts for English intonation learning. Notably, the variable indicating that students have used podcasts for this purpose exhibits a substantial mean difference of 1.457 ($t = 7.34$), indicating a significant increase in podcast usage. Similarly, students' familiarity with using podcasts to learn English intonation has significantly increased, with a mean difference of 1.008 ($t = 9.01$). Furthermore, students' excitement about using podcasts to enhance their

English-speaking skills also showed a notable increase, with a mean difference of 0.554 ($t = 9.18$).

In addition, students' belief in the effectiveness of podcasts for language learning exhibited a more moderate but still statistically significant increase with a mean difference of 0.431 ($t = 2.4$). The variables related to regular podcast listening and instruction involving podcasts for English intonation learning also demonstrated considerable positive changes, with mean differences of 0.925 ($t = 5.66$) and 1.43 ($t = 8.11$), respectively.

These findings provide robust evidence of the positive impact of the podcast intervention on students' perceptions and behaviors related to podcast usage, improving their English intonation and language skills.

It can be seen clearly that participants express their positivity towards the use of podcasts for intonation. These results reflect those of Jessica and Anne (2010), Samad et al. (2017), and Yeh et al. (2021) which showed the students' better pronunciation and intonation changes after using podcasts in their phonetics or pronunciation. Hence, the finding of this study appears to be attributed to literature that it concentrated more specifically on the improvement of intonation via using podcasts in speaking skill for non-English major students. In addition, this significant result is supposed to make a remarkable contribution to further research that focuses on evaluating students' performance in intonation by utilizing podcasts. Exploring the long-term effect of podcasts on students' intonation proficiency could contribute valuable insights for educators and curriculum developers in their pursuit of evidence-based techniques to improve spoken English abilities.

Conclusion

In conclusion, our research highlights the notable changes in students' perceptions regarding the importance of intonation and the effectiveness of podcast interventions in improving intonation during the study. The results indicate a clear positive shift in how students view the significance of intonation in effective English communication after the podcast intervention.

These changes carry significant implications for language educators and pedagogical methods. The increased recognition of intonation's importance suggests that incorporating intonation training into language courses can be highly effective, helping students become more aware of this vital aspect of communication. Additionally, the improved confidence in recognizing different intonation patterns signifies the potential of podcast-based interventions in enhancing intonation skills.

These findings underscore the value of implementing podcast interventions in language education, as they contribute to heightened awareness of intonation's importance and increased student confidence. For future directions, further research could explore the specific elements of podcast interventions that drive these positive shifts, providing educators with more precise strategies to foster intonation mastery in language learners. This would enhance English language education, making it more effective and engaging.

References

- Ashton-Hay, S., & Brookes, D. (2011). Here's a story: using student podcasts to raise awareness of language learning strategies. *English Australia Journal*, 26(2), 15-27.
- Bolinger, D. (1989). *Intonation and Its Uses: Melody in Grammar and Discourse*. Stanford University Press.
- Brown, D., & Warschauer, M. (2006). From the University of California to the World: Case studies in the internationalization of higher education. *International Review of Research in Open and Distributed Learning*, 7(3), 1-17.
- Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages*. Cambridge University Press.
- Chapelle, Carol A. 2003. *English Language Learning and Technology: Lectures on Applied Linguistics in the Age of Information and Communication Technology*. Amsterdam: John Benjamins.
- Chinnery, G. M. (2006). Going to the MALL: Mobile assisted language learning. *Language Learning & Technology*, 10(1), 9-16. Available at <http://llt.msu.edu/vol10num1/emerging/>
- Davydenko, O. (2021). Using BBC Learning English Podcasts to develop university students' listening skills. *e-mentor*, 92(5), 26-35.
- Drew, C. (2017). Educational podcasts: A genre analysis. *E-learning and Digital Media*, 14(4), 201-211.
- Ducate, L., & Lomicka, L. (2009). Podcasting: An effective tool for honing language students' pronunciation?. *Language Learning & Technology*, 13(3), 66.
- Godwin-Jones, R. (2011). Emerging Technologies: Autonomous Language Learning. *Language Learning & Technology*, 13(3), 4–11.
- Gonulal, T. (2020). Improving listening skills with extensive listening using podcasts and vodcasts. *International Journal of Contemporary Educational Research*, 7(1), 311-320.
- Gunawan, M. H., Mandiri, I. C. P., Suherdi, D., Hanifa, E. S. D., & Gunawan, A. P. (2023). Exploring Efl Students'perceptions Of The Use Of Podcast/Ted Talk In Extensive Listening Class. *Indonesian EFL Journal*, 9(1), 43-52.
- Halliday, M. a. K. (1970). A course in spoken English: intonation. In *Oxford University Press eBooks*. <https://ci.nii.ac.jp/ncid/BA11252359>
- Harris, H. and Park, S. (2008) Educational Usages of Podcasting. *British Journal of Educational Technology*, 39 (3), 548-551.
- Hasan, M. M., & Hoon, T. B. (2012). Esl Learners'perception And Attitudes Towards The Use Of Podcast In Developing Listening Skills. *English Teacher*, 41(2).
- Hubbard, P. (2013). CALL and the Future of Language Teacher Education. *CALICO Journal*, 25(2), 175-188. <https://doi.org/10.1558/cj.v25i2.175-188>
- Indahsari, D. (2020). Using podcast for EFL students in language learning. *JEES (Journal of English Educators Society)*, 5(2), 103-108.

- Jessica S. & Anne C. (2010). The Possibilities and Potential of Podcasting. Central States Conference on the Teaching of Foreign Languages. University of Wisconsin – Eau Claire.
- Kessler, G. (2013). Collaborative language learning in co-constructed participatory culture. *Calico Journal*, 30(3), 307-322.
- Ladd, D. R. (2008). *Intonational phonology*. Cambridge University Press.
- Lazzari, M. (2009). Creative use of podcasting in higher education and its effect on competitive agency. *Computers and Education*, 52(1), 2734.
- Levis, J., & Pickering, L. (2004). Teaching intonation in discourse using speech visualization technology. *System*, 32(4), 505-524.
- Llinares, D., Fox, N., & Berry, R. (Eds.). (2018). *Podcasting: New aural cultures and digital media*. Springer.
- Mai, C. T. (2015). A study on the effectiveness of WASP and Online audio recorder to develop sentence intonation reproduction by first-year, non-major students at University of Sciences–Thai Nguyen University.
- Mobasheri, A., & Costello, K. E. (2021). Podcasting: An innovative tool for enhanced osteoarthritis education and research dissemination. *Osteoarthritis and Cartilage Open*, 3(1), 100130.
- Nguyen, T. G. M. (2021). Some Common Ways for Students to Improve Pronunciation during Covid-19 Pandemic. *AsiaCALL Online Journal*, 12(5), 129-136.
- Nguyen, T. T. & Nguyen, H. T. (2021). *Using Podcasts in Teaching Vietnamese Listening and Speaking Skills to International Students*. *Journal of Education and Practice*, 12(7), 137-145.
- Purba, C. N. (2020). An analysis of students' difficulties in using English intonation at grade eight of SMP Negeri 2 Pematangsiantar. *Wiralodra English Journal*, 4(1), 50-64.
- Rachmaniputri, F. I., Purnawarman, P., & Gunawan, M. H. (2021). Students' perceptions towards the use of podcasts in listening class. In *Thirteenth Conference on Applied Linguistics (CONAPLIN 2020)* (pp. 179-187). Atlantis Press.
- Roach, P. (2000). *Techniques for Phonetic Description on Emotional Speech*. Newcastle. Northern Ireland: Cambridge University Press.
- Samad, I. A., Bustari, A., & Ahmad, D. (2017). The use of podcasts in improving students' speaking skill. *Journal of English language and education*, 3(2), 97-111.
- Sotlikova, R., & Haerazi, H. (2023). Students' Perceptions Towards the Use of Podcasts in EFL Classroom: A Case Study at a University of Uzbekistan. *Journal of Languages and Language Teaching*, 11(3), 461-474.
- Stanley, J. (2005). *Knowledge and practical interests*. Clarendon Press.
- Stanley, G. (2006). Podcasting: Audio on the Internet comes of age. *TESL-EJ*, 9(4), 1-7.
- Sundkvist, P., & Nguyen, X. N. C. M. (2020). English in Vietnam. *The handbook of Asian Englishes*, 683-703
- Tench, P. (1996). *Methodology in phonological interlanguage*.

- Trager, G. L., & Smith, H. L. (1951). *An Outline of English Structure*. The Trager School of Speech.
- Tran, T. T. & Vu, T. H. (2018). *Using Authentic Materials as Supplementary Sources of Teaching English for Specific Purposes to Third-Year Students at University of Danang*. *Journal of Language Teaching and Research*, 9(5), 953-960.
- Van, L. K., Dang, T. A., Pham, D. B. T., Vo, T. T. N., & Pham, V. P. H. (2021). The effectiveness of using technology in learning English. *AsiaCALL Online Journal*, 12(2), 24-40.
- Wennerstorm, A. (1998). Intonation as cohesion in academic discourse: A study of Chinese speakers of English. *Studies in Second Language Acquisition* 20.1: 1-25.
- Yeh, H. C., Chang, W. Y., Chen, H. Y., & Heng, L. (2021). Effects of podcast-making on college students' English speaking skills in higher education. *Educational Technology Research and Development*, 69, 2845-2867.
- Yoestara, M., & Putri, Z. (2019). PODCAST: An alternative way to improve EFL students' listening and speaking performance. *Englisia: Journal of Language, Education, and Humanities*, 6(1), 15-26.
- Zhang, R., & Zou, D. (2022). Types, purposes, and effectiveness of state-of-the-art technologies for second and foreign language learning. *Computer Assisted Language Learning*, 35(4), 696-742.

Biodata

Ms. Linh Nguyen

Ms. Linh Nguyen is an English teacher for non-English-majored students at FPT Polytechnic College, FPT University, Vietnam. Her research interest is language teaching methodology, especially for teaching listening and speaking skills. She always tries her best to help non-English-majored students enhance their English competency.

Orcid account: <https://orcid.org/0009-0006-8760-0755>

Ms. Luong Nguyen

Ms. Luong Nguyen is an English lecturer at FPT Polytechnic College, FPT University, Vietnam. She is interested in applying technology in teaching and classroom management.

Orcid account: <https://orcid.org/0009-0007-4111-031X>

Ms. Hanh Le

Ms. Hanh Le has been working as an English lecturer at School of Languages and Tourism, Hanoi University of Industry, Vietnam since 2007. Besides teaching, she currently works as the deputy director of the center of training and partnership development at her school. She has taken responsibility of designing and teaching EOP blended program for technical students. Her areas of professional interest include professional development, EMI, and ICTs in education.

Orcid account: <https://orcid.org/0000-0003-2139-5729>